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ORIGINAL ARTICLES.

THE SIMILARITY OF ELECTRIC AND NERVE FORCES.[1]

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In the torpedo the body is somewhat oval and rounded. Our native species, found mostly in winter, especially on the low, sandy shores of Cape Cod, is Torpedo occidentalis (Storer). Its batteries and nerves are substantially as in the European species. The electrical organs are constructed on the principle of the Voltaic pile, consisting of two series or layers of hexagonal cells, the space between the numerous fine transverse plates in the cells filled with a jelly-like, trembling mass, each cell representing, so to speak, a Leyden jar. There are about 470 cells in each battery, each provided with nerves sent off from the fifth and eighth pairs of nerves. The dorsal side of the apparatus is positively electrical, the ventral side negatively so. The electrical current passes from the dorsal to the ventral side. When the electrical ray is disturbed by the touch of any object, the impression is conveyed by the sensory nerves to the brain, exciting there an act of will which is conveyed along the electric nerves to the batteries, producing a shock. The benumbing force is lost by frequent exercise, being regained by rest; it is also increased by energetic circulation and respiration. As in muscular exertion, the electrical power is increased by the action of strychnine. (Owen.)

Marey has quite recently made interesting experiments on the torpedo, examining the discharge of the fish with the telephone. Slight excitations provoked a short, croaking sound. Each of the small discharges was composed of a dozen plexus and pulsations, and lasting about one-fifteenth of a second. The sound from a prolonged discharge, however, continued three or four seconds, and consisted of a sort of groan, with a tonality of about *mi* (165 vibrations), agreeing pretty closely with the result of "graphic experiments." Marey has also studied the resemblance of the electrical apparatus of the electrical ray or torpedo and a muscle. Both are subject to will, provided with nerves of centrifugal action, have a very similar chemical composition, and resemble each other in some points of structure. A muscle in contraction and in tetanus executes a number of successive small movements or shocks, and a like complexity has been proved by M. Marey in the discharge of the torpedo.—(Packard, Zoölogy.)

Malapterurus electricus (Lacepede), of the Nile, is electrical, the electric cells forming a layer directly beneath the skin, and enveloping the whole body except the head and fins. The cells are minute, lozenge-shaped, about one and a half millimetres in diameter. They are supplied by a nerve from the spinal cord. The shock is comparatively feeble, but suffices for defence, the fish being protected by its electrifying coat as the hedge-hog by its spines. (Owen.) One of the lowest teleosts, the electrical eel (gymnotus electricus), of South America, is two metres in length, and is characterised by its greatly-developed electrical batteries. These are four in number, situated two on each side of the body, and together form nearly the whole lower half of the trunk. The plates of the cells are vertical instead of horizontal as in the torpedo, while the entire batteries, or cells, are horizontal instead of vertical as in the electrical ray. The nerves sent to the batteries of the eel are supplied by the ventral branches of about two hundred pairs of spinal nerves.

In the torpedo there are about 470 cells in each battery. This is one of the lowest orders of vertebrates, and therefore the battery construction is simple, the discharges resembling more those from a charged Leyden jar. The machine remains at rest to be re-charged before another manifestation of power. As we ascend, the organism becomes more complex, and in the higher fishes and reptilia and lower mammals the electric apparatus resembles more dynamic electricity, whilst in chimpanzee and gorilla we have Faradic electricity; and, lastly, in man the phenomena require a combination of the different manifestations of this force. Hence we have discharge as from a Leyden jar when we knock a man heels over head; whilst in reasoning we employ, or bring into relation, or co-ordinate all of the different arrangements, resulting in magnetico-statico-dynamic force—ratiocination. (S.)

As I have contended for years past, it is apparent, from the close analogy of electricity to nerve force, that this agent embraces a wide range of morbid conditions. Through the nervous cords which act as conductors, every part of the animal economy can be reached. In this way secretion and elimination

[1] Read in the Section of Practical Medicine, Materia Medica and Physiology at the Thirty-Sixth Annual Meeting of the American Medical Association.

of morbid products may be promoted, and the organ or apparatus restored to healthy action. The three great forces of nature are heat, light, and electricity. These are the forces under whose influence vegetation is produced. Heat and moisture cause the germ of life in seed to awaken; the materials stored up for the use of the embryo undergo change, both chemical and mechanical, so as to be fit for appropriation. The architecture of the plant begins. A spire shoots up from the bud, under the influence of the sun's light; the food afforded by the atmosphere is appropriated. Forces are active at the root; forces are active in the blade. There is no doubt, in my opinion, that electricity is one of the active forces which contribute to plant growth. We have all the conditions of its generation—heat, moisture, unequal heating of different mineral substances, causing thermo-electricity. We also have chemical action. It is impossible to draw a line of demarcation between vegetable and animal structure, and I doubt not that heat, light and electricity are the physical forces under which animal structure is built up. The light of the sun is as necessary to the health and vigor of the animal as of the vegetable kingdom. Indeed, as already stated, the two shade into each other so as to render it impossible to say where the vegetable ceases and the animal begins. Electricity, being one of the forces which contribute to the animal organism, is necessary to functional health.

ELECTRICAL FORCE IN MAN AND NATURE.

All phenomena of the organic or inorganic world are now being interpreted in the terms of matter, motion and force. The pilot idea of the doctrine of evolution to-day is that everything proceeds from the simple to the complex, and that back of all the manifestations of matter and of mind there lies "unity of force." It is this acting, living, persistent principle which constantly sits at the loom of time, and arranges the position and the texture of the threads that make up the web of things. This ancient weaver called "Force" has received many different names. When it works among molecules we call it cohesive attraction. When it works among the ultimate atoms, building them up into the delicate and beautiful crystals we call it the crystallizing forces. When engaged in uniting kindred atoms we call it chemical force, or chemical affinity. Our meaning, however, is sufficiently indicated without further extension of the list of forces.

Nature delights in prodigality of results, but she is parsimonious in the number of her working powers. Given a little matter and motion and she will construct a world. The lines of force radiate in all directions, always acting, always persistent. Difference of result is but the product of the same force differently conditioned. A tree and a mammal betray the same parent force. In the ultimate analysis we reach simplicity of cause and "unity of force."

Perhaps one of the most impressive instances of the play of force is to be seen in the phenomena of light. Light is but a result of the rapid oscillations of the ether waves. Hundreds of millions of these waves strike the retina before we are conscious of the sensation of light. How this sensation is translated into consciousness is a mode of force of which we know nothing. One fact, however, has been determined, viz.: that color is a result of motion. Less rapid oscillations are required to produce in us the sensation of the red in the spectrum than o the violet. Electric light, which is the most intense of all light, is but a product of exalted motion. A certain degree of motion produces sound; this motion increased produces heat; a further increase produces all the colors of the spectrum in their regular order. Still exalting this motion, we obtain electric light.

The theory of wave motion in the ether had its origin in the wave motion of water and atmosphere. The ear sustains the same relation to sound that the eye does to light. There is a close analogy between the harmony of sound and the harmony of color. The rhythm of sound has its unvarying conditions in reference to the human ear. Atmospheric vibrations, when they exceed a certain number per second, lose their individuality, and become merged into a hum of indistinct sound. The auditory nerve is finely adapted to take in the whole range of the gamut. Sounds, higher or lower, in either direction, cease to be distinct.

It remains to say a word in reference to the more special manifestations of force. The human system supplies the most appropriate example. From the persistence of force we can but conclude that between the mind and body there is the closest relation, sensation, thought, and our most involved sentiments imply the destruction of waste of the gray tissue of the brain molecules. This waste is only another name for one mode of the "play of force." In a word, man, as he is, is but a product of force, acting, in the first instance, on a germ hardly microscopic, and mind, with all its wonderful and complicated powers, is evolved from the simplest beginnings. A Raphael or a Newton are evolved, in common with the lowest orders of animal life, from the product of the same force, controlled and governed by the same law, which had its fitting conditions and relations. Want of harmony in these, as we before remarked, implies want of harmony in result. A healthy mind, healthy morals and a healthy religion are the resultants of the unimpeded action of force.

THE ADVANCE OF MEDICAL SCIENCE.

A knowledge of the brain and of the network of the nervous system is the essential to every educated physician, who would minister to a body, or to a mind diseased. The ability to maintain a proper medium, through the exaltation or depression of nerve power is requisite to him who would understand correctly the nervous system. Her path to universal empire, will continue to be, as it is now, dotted all along with rejected theories. She is now making rapid strides, and has indeed become an ocean of truth. Let us keep abreast, at least, of that portion of its mighty tide which is now carrying the science of medicine beyond its ancient land-

marks, enriching it with new truths. Just how electricity acts as a therapeutic agent, no experimenter has satisfactorily explained, though learned minds have elaborated ingenious theories, simple and complex; still we will maintain our text: "The unity of Force." We will again note that electricity is but another name for the most exalted motion known. We will then be able, in some degree, to comprehend its action upon our bodies, and its true place in medicine, and how it acts through the brain, and its infinite ramifications. Nerve velocity is 60 yards per second; sound velocity is 332 yards per second; cannon ball velocity is 550 yards per second; light velocity is 360,000,000 yards per second; electrical velocity is 450,000,000 yards per second.

Hence it can be readily understood, how electricity, direct action, may accelerate our natural forces; how its reverse action may depress them, how its chemical action may dissolve or electrolize morbid growth; how even may dilate the vascular system, or accelerate the vaso-motor; and how, through the sympathetic system exalt the trophic powers, or produce inhibitory action.

The attention of electricians was concentrated upon Electro-Physics until the perfection of the mechanical contrivance by Morse. In due time it was known to the medical profession that electricity was a powerful therapeutic agent, and its applications in the treatment of diseases wrested from the hands of quacks and charlatans. Electro-Therapy is now an important specialty in medicine. The close analogy of electric to nerve force at once caused attention to be directed to its employment in the treatment of nervous diseases; but experiment has shown that it is applicable to the treatment, the relief and cure of other pathological conditions. Thus it may be used as a tonic in cases of nervous debility, in cases of paralysis so as to take the place of nerve force which presides over functions of nutrition. The nutrition of the paralysed limb is thus sustained, and likewise the revival of nervous energy promoted. It is apparent from the close analogy of electricity to nerve force, that this agent embraces a wide range of therapeutic conditions. Through the nervous cords which act as conductors, every part of the animal organism can be reached. In this way secretion and elimination of morbid products may be promoted, and the organ or apparatus restored to healthy action.

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The various conditions under which electricity is manifested enable us to apply it to a variety of morbid conditions. Its wonderful decomposing power (electrolysis) has been utilized by the physician. The intense heat incident to its manifestations by certain combinations, has enabled the surgeon to substitute in many cases the cautery for the knife, indeed to apply it to the section of morbid growths not remedial by the knife.

It may be stated in order that progress shall be had in any branch of science, appropriate apparatus is necessary. Scientific speculation is a great lever, but it must be controlled by experiment; speculation must be tested by experiment, for the human mind is too apt to be seduced by the pleasure of speculative philosophy, and too prone to abandon the paths of observation and sound induction. From the want of apparatus and the ignorance of its different modes of manifestation, electricity as a therapeutic agent was seized upon by the charlatan and neglected by intelligent practitioners of medicine. By a curious coincidence the discoveries of electric science and improved apparatus was accompanied by great discoveries in regard to the functions of the nervous system. Whilst Oersted, Ampère, Faraday and others were making rapid strides in electric science, Sir Charles Bell, Magendie, Marshall Hall, Claude Bernard, Brown-Séquard and others were unravelling the intricacies of the nervous system. In no era of the world has there ever been such activity in scientific investigations, and the applications of science to the material comfort and welfare of mankind. At last the votaries of medicine contribute their quota, and many of the most eminent of the profession are devoting their talents and energies to the therapeutical effects of electric force in the treatment of diseases.

Electricity in suspended vital functions.—We have been induced to try the effects of electricity in cases of suspended vital function resulting from narcosis, and cases of apparent death from drowning, from experiments upon living rabbits, made by Sir Wilson Phillips, of England, from which it appears that electric force was used to substitute nerve power. The pneumogastric nerve of the animal was severed immediately after it had eaten some parsley. After the death of the animal, which had great difficulty of breathing, and perished apparently from suffocation, the stomach was opened and the parsley found undigested. A similar experiment of section of pneumogastric nerve was made, but a current of galvanism passed along the nerve, and continued for 26 hours.

No difficulty of breathing occurred as long as the current was kept up. The animal was killed, the stomach examined, the parsley was completely digested. It thus appeared that galvanic energy is capable of supplying nervous influence in that the process of digestion may be carried on. Similar experiments were made upon dogs with like results.

Influence of Anæsthesia on Vaso-motor Forces of the Circulation.—The following experiments by Drs. Bowdich and Minot illustrate the influence of anæsthetics on vaso-motor centres.

Anæsthetics, in producing insensibility, have accomplished such results by antagonizing the effects of irritation of sensitive nerves. One of the most constant physiological results of irritation of a sensitive nerve is a rise of arterial tension, due to a reflex stimulation through the vaso-motor centres of the muscular walls of the smaller arteries, especially those of the intestines. It is ascertained that in the majority of cases, the rise of blood tension consequent upon the irritation of the saphenous nerves, is less marked when the animal is under the influence of ether, than when the anæsthetic is not used. The first object was to determine the effects of anæsthesia on the reflex rise of the blood tension. This was accomplished in the following manner: An animal being placed on the operating table in the supine position, a solution of curari was injected into the jugalar vein, when paralysis ensued. When the respiratory movement ceased, the trachea was connected by means of a glass canula inserted into it with the apparatus for artificial respiration, which was so adjusted as to imitate as closely as possible the normal respiratory rhythm. A canula was then placed in the carotid artery and connected with a mercury manometer, carrying a pen by means of which the blood tension was recorded on a long strip of paper, which was kept in uniform motion by clock-work. The saphenous nerve was then placed upon electrodes. The irritation of the nerve was produced by closing the currents, by means of a key provided with a pen, thus recording the blood tension, which could be seen at a glance. After the anæsthetic had been administered the nerve was again irritated. Then the blood tension was notably decreased, and so continued to be as long as these experiments were tried.

But far more constant and obvious were the results obtained from chloroform. Here the irritation of the saphenous nerve caused a less marked rise in the blood tension, and sometimes there was no rise whatever. These facts present to my mind the clearest evidence in favor of the electrical remedy in cases of deep chloroform toxæmia, and the propriety of having accessibility to a Faradic instrument, complete and ready for immediate use in chloroform administrations.

E. Du Bois-Reymond, "first succeeded in demonstrating the presence of specific muscle and nerve currents by deflection of the magnetic needle." He likewise ascertained that, "if the muscle or nerve be excited by electric currents, or by mechanical or chemical irritants, so that the first is physiologically active, and the latter caused to contract, and then placed at two symmetrical points in connection with the galvano-multiplier, a less deflection of the needle is produced than when the nerve or muscle is in a quiescent state. This is called the negative variation of the current." The conclusion arrived at by Du Bois-Reymond was, that nerve and muscle contain innumerable positive and negative electric molecules which move with great regularity throughout the tissue. Perchance the power of electricity in cases of suspended animation is to restore the suspended electrical forces of the body to a normal condition, and thus reanimate failing vitality.

The effect of chloroform, the resuscitation of the still-born, and of the tranced, and of the inert uterus in post partum hæmorrhage, may be remedied in much the same way; that is to say, by appealing to the vaso-motor centres through the pneumogastric axis.

No nervous centre can act of its own motion or originate action. It must be excited to action. We might as well speak of sight without the action of the waves of the luminous ether, or sound without the vibration of sonorous substances. In investigation medicine has called to her aid other physical sciences. Natural philosophy has furnished the explanation of the mechanical contrivances, and we look to mechanics, hydraulics, and pneumatics to aid us to interpret the phenomena of locomotion, circulation, and respiration. It has furnished in electricity the probable means of interpretation of the force which operates the mechanism, the phenomena of the nerve power; she has furnished the microscope to enable us to see things invisible to the naked sight, whilst chemistry has laid before us the knowledge of the fluids of the body, and enabled us to solve the mysteries of digestion. These sciences have been called the hand-maids of medicine, they are in fact parts of the whole; without them no physiology, without physiology no art of medicine.

But with scalpel, microscope, and chemistry, we fail to delineate the anatomy of the nervous system. It is a truth that, that which is is but the sequence of that which was. The results of to-day could not be had without the investigations of yesterday. In like manner will the knowledge of to-day be the basis of the conclusions of to-morrow—such is the law of intellectual development; such is the sequence of scientific advancement. Sir Charles Bell first showed that the nerves of the human organization are distributed with regularity. It is the basis of the physiology of the nervous system. He first called attention to the functions of the spinal nerves, pointed out their different structures and their different functions; distinguished the sensory and the motor. Marshall Hall succeeded Bell, and we had his excito-motor system. Others succeeded Hall to explain nervous phenomena, among whom stands preëminent the great Claude Bernard.

But we owe more to Marshall Hall than the explanations he has given of nervous phenomena. He demonstrated that when the scalpel and the microscope fail, to determine its anatomy, we can yet map out the anatomy of the system. A physiological fact is as certain an indication of nervous distribu-

tion, as though we could follow its ramifications scalpel in hand or microscope to eye. Observation and experiment is the thread which leads out of the labyrinth, without which we must be lost in its intricate mazes. Marshall Hall has given us a map of the excito-motor system of nerves, Bernard has shown their peripheral distribution. The functions of the brain and spinal marrow are to be laid before us by pursuing the same line of investigation. By experiment, the number of devoted investigators give an earnest promise that the science of life may yet be illustrated, that the opprobrium that medicine is only the empiricism may be expunged, and that the day will yet arrive when medicine will be practised upon laws or principles known and recognized.

The whole forms a beautiful piece of mechanism, whereby under the orders of certain nerve centres it is set in motion. Blood flows in by the arteries regulated by the vaso-motors; the veins receive it, and dilate under the direction of the vaso-dilators; the muscular bands are brought into play by the nerve power conveyed to them, the result being what we call full nutrition. When nerve power is exhausted or its exaltation diminishes, muscles relax, veins contract, the parts are freed from blood. As a typical illustration of voluntary force we will cite its influence on the heart's action—say for seventy years—and, for convenience, fix the pulsations at sixty per minute. Then we will have the proposition that $60 \times 60 = 3{,}600$ beats per hour. Again, $3{,}600 \times 10 = 36{,}000$ beats in ten hours; or, in the words of the learned Draper, this little organ can execute "three thousand million beats without a stop; and propel a half million tons of blood, and momentarily wasting, repairs its own waste all this time."

The mathematical rhythm of four moving cavities, the perfect closure of its mitral and semi-lunar valves, and the regurgitating play of its tricuspid, have never failed. Much more could be said of other vital organs, under the control of the involuntary force. In the face of all these facts, how strikingly true is the saying, "How fearfully and wonderfully we are made," for, in regard to the heart, we have but to note that its nerve supply springs principally from three little ganglia, and a few nerve fibres originating from the brain, spinal and sympathetic. How delicate the source, how fragile and thread-like the conductors; how readily implicated, how sudden and certain the result. Yet, in death from such a cause, how obscure the character of the lesion!

THE TREATMENT OF DISEASES BY THE HYPODERMATIC INJECTION OF OILS.[1]

BY JOHN V. SHOEMAKER, A.M., M.D.,

OF PHILADELPHIA.

Experimental and clinical observations have taught us that oils when they cannot be swallowed, or are rejected by the stomach, can be absorbed by inunction and subcutaneous injection; and numerous instances of the absorption and assimilation of oil and fat by the skin have been reported, and their value in certain conditions, employed in this way, has been fully recognised. But the more rapid and effective use of these agents subcutaneously, while known, has had little or no practical application.

Menzel[1] and Perco first demonstrated the subcutaneous absorption of fat by injecting an ounce of it, in a fluid state, under the skin of a dog, and in the course of forty-eight hours it disappeared, without leaving any local effect. The first practical application of this discovery was probably made by Krueg[2] on an insane patient who refused to eat. Subcutaneous injections of olive oil, twice daily, were then administered, affording sufficient nourishment to keep the patient in good bodily vigor. At the end of a month he was induced to take his food in the natural way, and the injections were discontinued.

Shortly after this announcement of the practical effects in Krueg's case, a most important result from hypodermatic alimentation in a case of gastric ulcer was reported by Dr. James T. Whittaker, of Cincinnati, Ohio. According to Dr. Whittakers report,[3] after exhausting other medication the patient was given subcutaneous injections of drachm doses of milk, alternated with beef extract, every two hours for three days. The temperature declined, the pulse became stronger, and the existing pains and delirium disappeared. The milk and beef extract not being well borne by the skin, cod-liver oil was substituted for them, two drachms being given every two hours for two days, and one day as much as eight ounces was introduced. Two abscesses formed from the milk, but not any ill-effects followed from the oil, which was not only well borne, but its introduction was also free from pain. The inability of some of my patients to bear medicine taken into the stomach induced me, a few years ago, to test thoroughly the subcutaneous absorption of oil, and the effects which followed in some few of the cases under treatment.

Case 1.—Constipation.—Miss M., aged 43, was confined to her bed after an operation for cancer; bowels became sluggish, stomach irritable, and all efforts at evacuation failed for six days. On the morning of the seventh day two drachms of castor oil was mixed with an equal quantity of oil of sweet almonds, in order to make the oil sufficiently fluid for use; with a large hypodermatic syringe the injection was deposited into the subcutaneous cellular tissue of the back. An hour afterwards the patient complained of pains through the limbs, which continued to increase until a copious evacuation took place, an hour and a half elapsing from the giving of the injection to the evacuation, and another passage succeeding in a brief period.

Case 2.—Obstinate Constipation,—I was called to see a young man, eighteen years of age, suffering with nausea and vomiting; bowels had not been moved for nine days. Administered the ordinary

[1] Read before the Section of Practical Medicine, Materia Medica and Therapeutics, at the Thirty-Sixth Annual Meeting of the American Medical Association.

[1] Wiener medizinische Wochenschrift, April 17, 1869.
[2] Wiener medizinische Wochenschrift, August 21, 1875.
[3] "Hypodermic Alimentation," by Dr. James T. Whittaker, M.D., Cincinnati Clinic, Jan. 22, 1876.

remedies, which failed to act. At the end of forty-eight hours gave two drachms of castor oil, diluted as before described, hypodermatically. In the course of three hours a free movement from the bowels followed, and the patient was as well as usual in a few days.

Case 3.—Scrofula.—R. C., negro, aged 23, had a number of enlarged lymphatic glands around the neck, with several open ulcers. Hypodermatic injections of two drachms of cod-liver oil, twice daily, for four weeks, lessened the size of the enlarged glands, healed up the ulcers, and caused the patient to increase in weight. The usual food by the mouth was allowed during the treatment.

Case 4.—Syphilis.—Mrs. G., aged 37, very anæmic, was brought to the Skin Hospital by her physician. Tongue large, coated and flabby; complained greatly of dyspepsia and general debility. Several tubercles and infiltrated patches of syphilis were well developed on the face. Mercury and the potassium iodide had been administered at different times alone, with the effect of increasing the discomfort of the patient, and completely taking away all desire for food. Cod-liver oil was recommended subcutaneously, four drachms being given every day, in addition to the regular meals. At the end of two weeks the improvement was marked, and in seven days more the cod-liver oil was discontinued, and the patient put upon small doses of the iodide of mercury, which rapidly completed the cure.

Case 5.—Eczema,—This patient was an anæmic man, aged 39, whose anus was covered with extensive patches of eczema, the infiltration being particularly severe on the flexor surfaces. The itching was very obstinate, and little could be done to relieve it. He had been thus afflicted for eleven years. Pulse weak, appetite poor, digestion bad, with more or less constipation. The patient was intelligent, and carefully described the different methods of treatment that he had undergone. He was placed in the Skin Hospital, and two drachms of cod-liver oil was administered subcutaneously three times daily, and an ordinary dressing was applied to the patches. He rapidly showed signs of responding to the treatment. Skin became lighter and more natural at the end of four weeks, and the eruption became less annoying and lighter in color. During this period he was kept on good, substantial diet, and at the end of the fourth week tonics were given, and by the middle of the following month, just forty-two days from the time of his admittance to the hospital, he was discharged cured.

Case 6.—Paræsthesia, or Perverted Sensibility of the Skin.—R. M., a man of 69 years of age, had been under treatment for four years at various dispensaries and hospitals for an unbearable itching sensation of the skin of the entire body, only obtaining, at short intervals, temporary relief. When he came under my care the patient stated to me that worms were wriggling around in the skin; occasionally he thought they came out and ran over the surface, and almost set him wild with the horrible feeling that was caused by them. "When they begin to bore, and then crawl around," he added, "I tear the skin violently." The surface of the integument revealed only abrasions resulting from the scratching and rubbing. The disease was recognised as dependent upon a disordered state of the nervous system. The usual and unusual remedies were all tried, but with no success. When almost bordering on despair for a remedy, subcutaneous injection of two drachms of cod-liver oil was resorted to twice daily for a period of twelve days, when the patient pronounced himself much better. In three weeks the unpleasant sensations vanished, and in about thirty days he was discharged cured.

The cases referred to are but a few of the many that I have successfully treated by oil hypodermatically administered, alone or in conjunction with other suitable means. The laxative action of castor oil, alluded to in the cases cited, has again and again been verified on many patients affected with constipation. It might also be advisable, in cases of apoplexy, to test the effect of a more active purgative oil by placing it beneath the skin, in the form, for instance, of the cathartic principle of croton oil. Not only has the rapid and good purgative result of oil used hypodermically been thus demonstrated, but its nutritive action, when thus applied, has been shown to be valuable in debility, dyspepsia, scrofula, tuberculosis, and in certain diseases of the skin and nervous systems. It is the quickest and best method of introducing oil into the system. It is an invaluable means of combating disease, particularly in the class of cases just enumerated, where more nutrition is required, and also for those patients who are either unable to swallow oil, or who cannot absorb and assimilate it by the alimentary canal. Oil can be used subcutaneously, alone or combined with other suitable agents that can be easily dissolved in it. It is a valuable menstruum for suspending in it other drugs for hypodermatic use. It can be given in connection with a suitable diet, and even with other medication by the mouth, or it can be used alone for alimentation. Oil deposited in this way in the tissues is absorbed, and is no doubt assimilated, and will alone keep up the nutrition of the body. It will at times arrest or assist in relieving scrofula, and will benefit tuberculosis. It is especially useful in diseases of the alimentary canal, as well as in all affections depending upon deficient nutrition. It will very often overcome an impoverished state and give tone and vigor to the system.

For a purgative action one or two injections of a drachm or two of castor oil usually suffices, but for a nutritive effect, the same quantity of one of the bland nourishing oils, *e. g.*, cod-liver or olive oil should be administered two or three times daily. In the event that alimentation is depending solely upon the injections they should be given about every two hours.

For the purpose of giving oil hypodermically, a large syringe provided with a needle of good calibre should be used, and the instrument should have a capacity of from two to eight drachms. The injections can be made in almost any part of the body, well provided with subcutaneous cellular tissue, into which the oil should always be thoroughly deposited. The points usually selected for the injections are the su-

perior and inferior scapular and sacral regions, on account of the subcutaneous cellular tissue being especially abundant there. Injections can also be made in the arms, the chest, the back, the buttocks and the legs. There is more or less irritation at the point of puncture of the skin, about the same as will be seen from the use of almost any hypodermatic injection. Sometimes there will also be some attending smarting and burning followed always with redness and swelling, or the formation of a nodular elevation which usually disappears in from twelve to forty-eight hours, No induration or inflammation follows the injections, provided the usual precautions are observed in using the hypodermic syringe properly, and the tissues of the person receiving it are in the normal condition. Oil has been so injected by me in very many cases, occasionally as much as one-half ounce being used at a time, without setting up any inflammation of the skin, or producing any unfavorable effects.

The results thus far realized, show that by the hypodermatic injection of oils, certain conditions and diseases can be controlled, relieved, or cured. It is an invaluable method in which full dependence can be placed, especially when the alimentary canal can no longer absorb and assimilate food or medicine.

A NEW COMBINED TROCAR AND CANULA AND ASPIRATING NEEDLE.[1]

BY H. LANDIS GETZ, M.D.,

OF MARSHALLTOWN, IOWA.

The common or simple trocar and canula has certain disadvantages, inconveniences or defects, as one may please to term its shortcomings. One is the fact that we have no positive means of knowing just when the instrument is plunged properly, or to a sufficient depth, into the cavity, except by the amount of resistance encountered, unless the trocar is withdrawn from the canula, when, if we happen to have properly entered the cavity, no inconvenience will result. If we have not, it may be necessary to re-introduce the trocar and try again—a more or less bungling operation.

Another objection is the fact that in the event of desiring to use a rubber tube, either as a matter of convenience or otherwise, we can only, or rather we are obliged to make the attachment to the canula after the trocar has been withdrawn. This is quite inconvenient in some cases; especially would it be so if we desired to evacuate an abscess high up through the vagina. Air would also be more likely to enter the cavity than by the use of the new device.

The objections to the common *aspirating* or *exploring needle* are, either that we have no tube attachment, or that we require a regular aspirating outfit, which means more or less expense. Another objection is the inability to remove the sharp or cutting portion of the needle after the cavity has been entered; consequently, as the cavity is being emptied, there is considerable danger of injuring or perforating the opposite surfaces, as in removing the effusion. In case of pericarditis there would be danger of wounding the heart.

The figure represents the trocar and canula, one-half full size, with tube attached ready for use: 1. Handle of wood; 2. Stylet, which screws into handle at 11 and at 8 into short trocar point; 3. Canula which screws on handle portion of canula at 12; 4. Handle portion of canula; 5. Part of handle portion of canula to which the rubber is attached; 6. Rubber disc making the canula air-tight; 7. Perforation in canula for the admission of fluid, which indicates the entrance of trocar into the cavity; 8. Trocar point screws on stylet; 9. Trocar point; 10. Rubber tube; 11. Stylet screws into handle; 12. Canula screws on handle portion of canula. Parts 3 and 9 can be made of any size desired, and attached to 1, 2 and 4. The aspirating needle attaches to 1 at 11, and the canula for same attaches to 4 at 12.

Seeing and realizing that these defects existed in the instruments in common use, I determined to overcome them as far as possible. I now present (Fig.) what I term a new combined "trocar and canula and aspirating needle," which, I believe, overcomes all the objections of the instruments now in use, and yet loses none of their advantages.

[1]Read in the Section of Anatomy and Surgery, at the Thirty-Sixth Annual Meeting of the American Medical Association.

PLACENTA PRÆVIA.

BY H. V. SWERINGEN, A. M., M. D.,

OF FORT WAYNE, IND.

On Saturday morning, July 18th, 1885, Mrs. C., a primapara, while engaged in shopping, was taken suddenly, without any premonitory warning, with a most profuse hæmorrhage, which, as the sequel will show, was uterine in character. Her clothing was saturated with blood, and quite a pool of blood was discovered where she stood. She was immediately placed in a carriage and driven to her residence, stopping on the way for her nurse to accompany her.

I reached her bed soon after she was placed therein, and found she was yet flowing considerably. Suspecting the nature of her situation, an examination revealed what is termed technically, *placenta previa lateralis*.

The presentation was the usual one, and the os uteri was dilated to about the size of a silver quarter dollar, dilatable; no pains. I at once tamponed and administered ergot, which measures, while they checked at once the flow, did not absolutely control the oozing. In the course of a few hours pains came on, when I removed the tampon, and, forming my fingers and thumb in the shape of a cone and introducing them into the os, had nothing else to do but to expand them to effect almost complete dilatation, so readily did the os yield. Whether to turn and deliver at once or to rupture the membranes and

allow the head to engage and proceed as in an ordinary labor, was now with me the question. I chose the latter course. As soon as the liquor amnii escaped the head engaged, and, by its pressure, stopped all hæmorrhage. I now assured the patient that so far as *she* was concerned I considered her danger passed, and on account of the progress she was now making toward a speedy delivery, I had great hopes for the babe. From this time on her labor progressed naturally enough, indeed more rapidly than is the case with the majority of primaparæ. Probably an hour had not elapsed when the head rested upon the perineum. The idea of employing the forceps never once suggested itself, because of the speedy progress of the case, and yet, when, in a short time after the head began to distend the perineum, the child was delivered, it was born dead; not the slightest evidence of life could be detected; it had undoubtedly been dead for some time. During my first examination, however, its activity was a subject of remark. The cord was around its neck, but this fact alone is insufficient to account for its death; there must have been pressure exerted upon it by the child's head soon after it became engaged in its route through the pelvis.

Now, every case has its lesson to impart, as has every story its moral. In the one before us, I am certain I could have saved the babe had I either turned and delivered, or applied the forceps the moment I broke the water; neither of which procedures, however, seemed nor were they necessary as aids to the mother in giving birth to the child. A resort to either measure in this case would with great reason be considered "meddlesome midwifery" by those in attendance, and yet either one would undoubtedly have saved the life of the babe. What is the obstetrician to do under these circumstances? Will some one answer? At this writing the mother is doing nicely, and would no doubt have done just as well had either the methods of delivery above suggested been adopted.

Fort Wayne, Ind, Aug. 10, 1885.

MEDICAL PROGRESS.

ANATOMY AND PHYSIOLOGY.

THE PNEUMONIA-COCCUS OF FRIEDLANDER.—At the close of a valuable paper on this subject, DR. GEORGE M. STERNBERG draws the following conclusions:

The pneumonia-coccus of Friedlander is identical specifically with the micrococcus previously described by me, and which is commonly found in normal human saliva. The capsule, or mucous envelope, which sometimes surrounds this micrococcus, described by Friedlander in 1883, and photographed by me two years previously, cannot be accepted as a distinguishing character of this species, inasmuch as it is not constantly present, and the circumstances upon which its development depends have not been accurately determined. It is established that this is a pathogenic organism, as far as certain lower animals are concerned, and that its pathogenic power varies under different circumstances. It seems extremely probable that micrococci are concerned in the etiology of croupous pneumonia, and that the infectious nature of this disease is due to its presence in the fibrinous exudate into the pulmonary alveoli.

But this cannot be considered as definitely established by the experiments which have thus far been made upon lower animals. The constant presence of this micrococcus in the buccal secretions of healthy persons indicated that some other factor is required for the development of an attack of pneumonia; and it seems probable that this other factor acts by reducing the vital resisting power of the pulmonary tissues, and thus making them vulnerable to the attacks of the microbe. This supposition enables us to account for the development of the numerous cases of pneumonia which cannot be traced to infection from without. The germ being always present, auto-infection is liable to occur when from alcoholism, sewer-gas poisoning, crowd-poisoning, or any other depressing agency the vitality of the tissues is reduced below the resisting point. We may suppose also that a reflex vaso-motor paralysis, affecting a single lobe of the lung, for example, and induced by exposure to cold, may so reduce the resisting power of the pulmonary tissue as to permit this micrococcus to produce its characteristic effects.

Again, we may suppose that a person, whose vital resisting power is reduced by any of the causes mentioned, may be attacked by pneumonia from external infection with material containing a pathogenic variety of this micrococcus having a potency, permanent or acquired, greater than that possessed by the same organism in normal buccal secretions.—*Am. Jour. Med. Sc.*, July, 1885.

AMOUNT OF PEPSIN IN GASTRIC JUICE IN NORMAL AND PATHOLOGICAL CONDITIONS OF THE STOMACH.—DR. E. SCHUTZ, as the result of very careful examinations, draws the following conclusions: The gastric juice, obtained by means of a tube from the healthy empty stomach, contains, as a rule, pepsin, the amount of which varies very little in the same individual at different times; but in different individuals it varies between .4 and 1.2 units. Where the stomach is diseased, the pepsin obtained, under similar conditions as in the healthy person, is much less, as a rule, and may even be altogether absent in severe cases, or those that have lasted for some time. In less severe cases there was also observed some diminution of the pepsin. In nervous dyspepsia there is little or no change in the amount of this substance present: also the same was noted in the dyspepsia of anæmic and chlorotic patients, and even in those suffering from tuberculosis. A normal or only slightly decreased amount of pepsin is almost always accompanied by a strongly acid reaction of the gastric juice, whilst if the amount is much decreased, or there is none at all present, the reaction is, as a rule, alkaline, neutral, but feebly acid.—*Deutsche mediz. Zeitung*, May 4th, 1885.—*Bristol Med-Chir. Journal*, June, 1885.

POWER OF MILK, TAKEN FROM AN ANIMAL SUFFERING FROM SPLENIC FEVER, TO COMMUNICATE THE DISEASE TO OTHERS.—MESSRS. CHAMBRELENT and MOUSSONS, writing to the *Revue für Thierheilkunde*, June, 1884, on this important matter, give the results of some experiments made by them.

Feser of Munich, in the year of 1879, said that the milk of an animal suffering from splenic fever contained the infectious substance, and the following experiments of Messrs. C. and M. confirm this statement:

1. A Guinea-pig that had had a litter ten days previously, was inoculated with the cultivated virus of anthrax, as a result of which it died in the course of a day. An hour after its death, a drop of milk was removed from it, and cultivations were made in beef bouillon. A guinea-pig that was inoculated with a droop of this cultivation fluid died after two days, and in its blood the bacillus anthracis was found. A second guinea-pig, which had been inoculated, died during the next day.

2. A similar experiment, using the same methods but not the same animals, resulted in the death of two guinea-pigs.

3. With the same virus as used in experiment No. 2, a rabbit, which was yielding milk at the time, was inoculated; but it remained healthy, and its milk did not produce anthrax bacilli on cultivation.—*Deutsche mediz. Zeit., No 56.—Bristol Med-Chir. Journal*, June, 1885.

MATERIA MEDICA AND THERAPEUTICS.

PHYSIOLOGICAL ACTION OF COCAINE.—M. ARLOING has recently forwarded a long communication to the Biological Society on cocaine. He has made a lengthy series of careful researches on the physiological action of cocaine, which lead him to draw the following conclusions: The chlorhydrate of cocaine is a purely local anæsthetic. Contact of the nerve-ending plate with cocaine is the principal cause of anæsthesia. Cocaine provokes constriction of the capillary vessels, but M. Arloing does not think that the corneal insensibility produced by cocaine ought to be attributed to regional anæmia, inasmuch as anæsthesia can be produced before and after the section of the cervical branch of the sympathetic. The anæsthetic effects of cocaine salts are very evident on epithelial mucous membranes; on one especially in which the nerve terminations are intra-epithelial—the corneal membrane; thus it may be argued that anæsthesia depends on contact, which is not affected by the local circulation. In the more important nerves, where the nerve elements are protected by the perepheral connective tissue and the lamella sheaths, anæsthesia is produced more slowly, so slowly as sometimes to escape observation.

Interstial injections of cocaine anæsthetize small nerves, as is proved by the enucleation of the eye-ball. A solution of cocaine deposited on the surface of the eye slowly penetrates through the epithelium, the nerve terminations are impregnated, traverses the cornea, circulates in the lymphatics of the eye and aqueous humour, bathes the iris and finally passes into the circulatory system and kills the guinea-pig. M. Arloing concludes, from his experiments, that salts temporarily modify the physical properties of protoplasma, the elements of nerve terminations, also fibullar elements. M. Brown-Séquard believes that the anæsthetic effect of cocaine is due to inhibitory phenomena. In a communication to the Biological Society he stated that the fact that wounds became anæsthetised when the animal's larynx is irritated by carbolic acid, chloroform, or galvanization, suggested to him that the action of cocaine is inhibitory. By slightly irritating his own laryngeal mucous membrane he relieves a feeling of intense fatigue, and also removes rheumatic pain. He injected chlorhydrate of cocaine along the superior laryngeal nerve; all the wounds made the previous day were anæsthetised, the sciatic nerve was stretched without producing the slightest pain. An analgesic zone exists around each wound; the wounds made after the application of cocaine were hyperalgesic. M. Brown-Séquard therefore refuses to admit the anæsthetic properties of cocaine, and further asserts that if a large dose is injected the poisonous properties of cocaine prevent the anæsthetic phenomena.

A NEW ETHER.—M. RABUTEAU has prepared a new ether, the salicylate of methyl. It is almost white, boils at 222° C., has an agreeable smell, and is almost insoluble in water. It is prepared by treating methylic alcohol with salicylic acid or sulphuric acid; or even a better formula is that of sodium salicylate, sulphuric acid and alcohol. It is not a saturated ether; it is a meno-ethyl, and therefore almost an acid, and forms salts in presence of an alkali. It colors salts of iron violet, and behaves like salicylate of soda in the presence of urine. This ether does not produce thorough anæsthesia, and its effect is obtained by administering injections combined with inhalations. Part of the dose of salicylate of methyl is utilized in the organism, and part eliminated by the respiratory and renal organs. The vapor of salicylate of methyl exhaled is easily detected by being brought into contact with iron perchloride.

MEDICINE.

THE KNEE-REFLEX IN DIPHTHERIA AND ITS SEQUELÆ; AND IN DIABETES MELLITUS.—BERNHARDT has for some years given considerable attention to this subject, as concerns diphtheria, and in a recent communication (*Archiv für Pathologische Anatomie und Physiologie, und für klinische Medicin*, March, 1885), he advances the following conclusions: 1. In a very great number of patients who have suffered from diphtheria (of the throat and pharynx), the reflex disappears after the lapse of some weeks from the date of illness. 2. This disappearance, although more common in severe cases which have been followed by paralytic affections, is not confined to them, but is found in mild cases which have no such sequelæ. 3. The "Westphal's phenomenon" may not appear until two months from the date of the onset of the diphtheria, but it may have appeared and vanished within three weeks from the onset of the date of

invasion. 4. The reflexes frequently disappear on the one side before the other is affected, so that the knee phenomenon appears to be one-sided. During the disappearance of the Westphal's phenomenon the return of the reflexes is also often at different times on the two sides. 5. The reflexes may remain absent for a long time without any other sign of nervous change. 6. These facts are of value in regard to testing the knee reflex in healthy persons, as after diphtheria a patient is not reckoned as healthy for five or six months. 7. It has not been determined whether the knee reflex becomes altered at a later date than two months or if it remains healthy afterwards if unchanged within such a period. 8. The skin and tendon reflexes do not show any parallelism in their presence or absence. 9. Such investigations are only of value when the quadriceps is intact, no atrophy is present, and the muscular irritability has suffered no change.

In diabetes mellitus, ROSENSTEIN (*Berlin. klin. Wochensch.*, No. 8, 1885) comparing the particulars of cases observed with special reference to the knee phenomena, draws the following conclusions: 1. In a number of diabetic cases the knee-reflex is permanently absent, and cannot be called back by subcutaneous injections of strychnine, as Schreiber has found to be the case in chronic alcoholism. 2. The failure of this reflex stands in no relation to the amount of sugar in the urine, nor to the quantity of urinary contents giving the iron-chlorine reaction, nor to acetone, and cannot therefore be considered a toxic phenomenon. 3. It is also independent of the general condition of the patients as to nourishment and bodily strength. 4. So far as one post-mortem can be trusted, the disturbance of the reflex circuit, between the crural nerve and the lumbar cord, is functional and unconnected with organic alteration of the medulla. Rosenstein does not incline to give much heed to this defect of patellar reflex, either in diagnosis or prognosis, but recognises in it merely another disturbance of innervation such as the paræsthesia, anæsthesia, neuralgia, and impotence, which are well known in diabetes.—*Edinburgh Medical Journal*, July, 1885.

INTRAVENOUS INJECTIONS OF LIQUOR AMMONIÆ IN CHOLERA.—In the *Russkaia Meditzina*, No. 8, 1885, p. 157, DR. JAKOV J. TRUSEWICZ, of Cronstadt, recommends a trial of the intravenous injection of liquor ammoniæ (about three or four fluid pounds of water, containing from five to twenty drops of liquor ammoniæ to every six ounces) in the collapse and algide period of Asiatic cholera. The transfusion of the ammoniated water in cholera would satisfy two indications; first, "it would augment the mass of the blood and neutralize an anomalous reaction of the latter;" and, secondly, "being the best of all known analeptic means, liquor ammoniæ would stimulate the cardiac action." [*See* Dr. Trusewicz's article in the *London Medical Record*, Feb., 1885, p. 69. The author mentions three new instances illustrating the most powerful stimulating virtue of the hypodermic injection of five or seven drops of liquor ammoniæ in cases of apparently hopeless collapse. In one of the cases, the injection revived a patient with enteric fever after musk and other usual stimulants had utterly failed. In another case, in that of phthisis in the last stage, the author found the patient pulseless, deadly pale, cyanotic and delirious, in cold clammy perspiration, with stertorous breathing, reactionless pupils, and involuntary defæcation. Two hypodermic injections, each of three drops of liquor ammoniæ, were made within twenty minutes; immediately after the second injection, the patient recovered consciousness, began to talk, and even joke, with his attendants, then fell asleep for five hours, and on the next morning heartily enjoyed his breakfast, as if nothing had happened.] The author also advises trial of the internal administration of liquor ammoniæ in in cholera cases. In certain cases irritant baths of ammoniated water might prove of service. Dr. Trusewicz suggests, also, to give a trial to inhalations of oxygen as well as to systematic massage of the whole body, after Weir-Mitchell's plan.—*London Medical Record*, July 15, 1885.

COCAINE IN HAY FEVER.—DR. J. WESTON BULL says that the eye does not seem to be protected against the irritating action of the pollen-grain by two or three drops of a 2 per cent. solution of hydrochlorate of cocaine, though the inflammation and itching, arising from the swelling and bursting of the grain, are allayed and removed by its use. He is trying stronger solutions. The violent sneezing and swelling of the mucous membrane of the nose, arising from the same cause, are removed by a few drops of a 1 per cent. solution, sniffed off a camel's-hair brush; so that, up to the present, he has been comparatively free from nasal-symptoms.

Probably the only way to ascertain the exact prophylactic effect, if any, of the cocaine, is to procure pollen which has a known irritating effect on the experimenter's conjunctiva, and to try its action on both eyes, having previously inserted solutions of varying strength into one of them; and these experiments he hopes to carry out.

Apparently, as was anticipated, cocaine is at present our best topical application in the treatment of this distressing complaint, though Dr. Bull found vaseline of great service last hay-season for the nose. It certainly alleviates, and may be found prophylactic. The only other effect on the eye is a slight smarting, soon wearing off, and a little dilatation of the pupil, lasting about twelve hours.—*British Medical Journal*, July 4, 1885.

THE PATHOLOGY OF HERPES ZOSTER.—DUBLER, in *Virchow's Archiv.* (vol. xcvi, p. 177), gives an account of two cases of herpes zoster in which he made a thorough anatomical and histological investigation. In both he found distinct evidence of neuritis which extended to the cutaneous tings of the nerves, and he believes that the eruption is a true inflammatory one due to the extension of the inflammation from the nerve tings to the tissue of the skin. He combats the view that the disease is a tropho-neurosis depending on lesions in the ganglion of the posterior root, as he found these ganglia healthy in his cases.

In one of his cases the inflammation of the nerves originated in a periostitis of three ribs, the corresponding intercostal series being affected. Another interesting point is that the neuritis extended somewhat into the muscular tings, just as other inflammations of nerves do, and in this connection it is very interesting that in several cases muscular paralysis has been associated with herpes, as in a case by Broadbent, where a herpes in the course of certain branches of the brachial plexus was associated with partial paralysis in the corresponding motor nerves; and one by Vernon in which with herpes zoster ophthalmicus, there was paralysis of the oculomotor nerve.—*Glasgow Medical Journal*, July, 1885.

SURGERY.

On Resection of the Ankle.—In the *Bulletin de l' Académie Royale de Médecine de Belgique*, tome xviii, No. 12, Dr. Liebrecht, of Liège, describes an operative procedure which he has recently devised for resection of the tibio-tarsal articulation in cases of fungous arthritis. The methods that have hitherto been practised are all, he states, attended with much labor, in consequence of the difficulty in exposing and dividing the numerous ligaments of the ankle, and are apt to cause injury to the tendons, vessels, and nerves around the joint. The following is a description of the author's method, which, however, has up to the present time been performed only on the cadaver. The skin incision is made from the middle of the posterior border of one malleolus to the middle of that of the opposite malleolus. The tendo Achillis is then divided on a director. A second division, perpendicular to the first, is now made along the inner border of the tendo Achillis. This is about 2½ inches in length, and passing downwards, almost reaches the inner tuberosity of the calcaneum. The soft structures between the tendon and the bone are now dissected away, so as to expose the capsule of the joint and the posterior peroneo-astragaloid ligament. On excision of these ligaments, the astragalus and the lower extremity of the tibia are exposed to view, and also the line of articulation between these bones, and below this, the astragalo-calcanean line. The tendon of the flexor longus pollicis is then displaced inwards from the posterior surface of the tibia, and all the tendons, vessels, and nerves situated behind the two malleoli can now be easily pushed forwards, so as to expose the whole of the posterior aspect of the joint. If the bones be hard, as is mostly the case in the cadaver, the posterior surface of the astragalus, at one of its borders near a malleolus, should be attacked with chisel and mallet. A notch should first me made along the whole width of the bone, so that by subsequent action of the chisel, the upper portion of the astragalus may be removed in one piece. If necessary, one or more slices of bone may be afterwards removed. The end of the tibia, if diseased, may be excised in a similar manner. If the diseased bone be very soft, it may be scooped away. The articular surfaces of the malleoli having been exposed, they may be scraped or removed with the chisel. The lateral ligaments may now be divided with a blunt-pointed bistoury. If any fragments of the astragalus remain adhering to the capsule or ligaments, they should be torn away with forceps. A large cavity is thus formed, at the bottom of which is found the articular capsule of the front of the foot, which may be readily scraped, or, if necessary, excised with scissors. If the loss of bone be not very great, and particularly if the malleoli have been partially preserved, the cavity may be left to become filled up by granulations; and then, after recovery, the patient will have a foot that is almost normal. When it has been found necessary to remove much bone, the opposed osseous surfaces of the leg and tarsus should be fixed together, so as to attain osseous ankylosis. Finally, the divided extremities of the tendo Achillis and edges of the external wound should be brought together by sutures.

Dr. Liebrecht claims for this operation the following advantages. "It does not cause any serious primary lesion, or necessitate any useless sacrifice; the soft parts and the periosteum are not bruised in the course of the operation. It offers more chances than the other methods of preserving a limb of normal form, and better assures the integrity of its functions. It may be easily and quickly performed. Owing to the position of the wound, the discharge of secretion will be effected without any difficulty, and the process of repair will be carried on much more rapidly."—*London Medical Record, July, 1885.*

Acute Suppuration after Forcible Rupture of Articular Adhesions.—In the *Centralbl. für Chirurgie*, No. 21, 1885, Professor M. Oberst reports four cases from the hospital practice of Volkmann, on which acute suppuration followed the breaking down of articular adhesions. In each of these cases, the ankylosis had followed an acute infective process. In two cases the primary affection was acute articular rheumatism, and in one the ankylosis was the result of acute infective osteomyelitis. In the fourth case, the nature of the primary affection could not be clearly made out, but there is no doubt, Oberst states, that it was some acute infective process. In two cases the suppuration caused by the breaking down of adhesions—in one in the cuticle, in the other in the knee—did not extend beyond the affected joint, whilst in the other two it was very extensive, and caused much disorganisation, necessitating amputation of the thigh in one of these instances, and causing death in the other. In the last case, which was one of ankylosis of the knee and deformity after acute rheumatism, forcible extension of the limb caused infraction of the inferior epiphysis of the femur, and was rapidly followed by acute and typical osteo-myelitis, with necrosis and formation of multiple abscesses in the medulla. Oberst thinks that the multiplicity of the abscesses, the character of the necrosis, and other morbid conditions in this case indicated that it was one of specific infective and not of simple septic osteo-myelitis, and it is suggested that it might have been due to the action of acute rheumatism. There can be no doubt, it is held, that in each of these four cases the suppuration set up by relatively slight force may be most readily

explained by the supposition that, from the date of the primary acute affection during disease, germs had been left in the affected regions, and that, by the attempt to restore the functions of the joint, they had again been rendered mobile and placed under conditions favorable to the restoration of more active vitality. In each case, the patient at the time of operation was quite healthy—except with regard to articular deformity—and free from fever, and in not a single instance did any abscess or fistula exist at this stage. There could not, is stated, have been any infection from without, as the integument in each case was quite intact, and the extravasation of blood caused by the forcible movements of the joint did not reach the surface. These cases, Oberst points out, should teach surgeons that they ought to be very cautious in attempting to break down ankyloses which have resulted from acute infective diseases. In cases of this kind, a cutting operation would certainly be less dangerous than forcible rupture of the adhesions by simple manipulation. In not one of the very numerous cutting operations that have been performed with orthopædic aims at the Oberst Hospital at Halle, has any instance been observed, Oberst states, of complication due to infection. It is supposed that the micro-organisms remaining after the primary disease find a much less favorable soil in the disinfected and antiseptically treated operation-wound, than in contused and lacerated tissues and in abundant or diffused extravasations of blood, conditions which often exist after forcible attempts to restore the functions of an ankylosed joint.—*London Medical Record, July, 1885.*

LAPAROTOMY FOR ILEUS.—DR. EDGAR KURZ reports a case of laparotomy performed on account of intestinal obstruction. The operation resulted in the complete recovery of the patient, and is interesting as being extremely rare in private practice.

The patient, a man aged 33 years, twelve months previously had a severe attack of typhoid fever attended with numerous complications. He recovered, however, and perfectly regained his health.

In August, 1884, for the first time, he noticed a small hernia into the right inguinal canal which did not descend into the scrotum, and could easily be replaced within the abdominal canal. October 23, 1884, Dr. Kurz was summoned to the patient, and found him suffering severe abdominal pain, attended with vomiting. Examination made at once, and the following day made it clear that the hernia was not the cause of the pain and vomiting. Palpation of the abdomen was not painful; the urine was clear; and after an enema, which was followed by a movement of the bowels, the pain grew less severe. However, the following night the pain returned, as also did the vomiting. No results from enemata; no evidences of hernia; and the patient's countenance was the characteristic *facies abdominalis*. Diagnosis was accordingly made of ileus. As to its cause and location nothing could positively be stated. The condition of the patient constantly became more serious, as evinced by stercoraceous vomiting, hiccough, and increased pain in the abdomen. The temperature on October 29th and 30th, was 97.3° F.; pulse 80. October 31st, the temperature became still lower, being only 96.4° F. November 1st, the condition of the patient being in no wise improved, operation was decided upon. After evacuating the bladder the abdomen was opened in the linea alba under a one and a half per cent. carbolic spray. While the incision was being made a severe attack of stercoraceous vomiting came on. Examination revealed no signs of peritonitis. Search was now made for cause of the obstruction, and a finger introduced into the ileo-cæcal region discovered the presence of a ring in which the colon had become ensnared. It was so tightly held that moderate traction was unable to release it, accordingly a probe-pointed bistoury was introduced and the ring twice incised. The bowel was now readily withdrawn, and was found to be injected and intensely red. The neck of the hernial sac was found to be a hand's breadth from the internal ring, which at once explained the negative result of all previous examinations. After the replacement of the intestine the abdominal wound was closed by three silk peritoneal and six superficial sutures, which were rendered antiseptic by previous boiling in a 5 per cent, carbolic solution. Iodoform was then applied and the wound covered with carbolized gauze, held in position by strips of adhesive plaster. The operation lasted scarcely half an hour.

The case progressed rapidly to recovery. Movement of bowels took place for the first November 6th, and the 12th of November he was able to take short walks and drives. At the present time he has resumed his ordinary employment, and is perfectly well. Defecation is normal, and all traces of the hernia, previously existing, have disappeared.—*Deutsche med. Wochenschr.*, March 26, 1885.—*Am. Jour. Med. Sc.*, July, 1885.

NEPHRECTOMY.—At the close of an article on this subject, PROFESSOR S. W. GROSS draws the following conclusions:

1. That lumbar nephrectomy is a safer operation than abdominal nephrectomy.

2. That primary extirpation of the kidney is indicated, first, in sarcoma of adult subjects; secondly, in benign neoplasms at any age; thirdly, in the early stage of tubercular disease; fourthly, in rupture of the ureter; and, lastly, in ureteral fistula.

3. That nephrectomy should not be resorted to until after the failure of other measures, first, in subcutaneous laceration of the kidney; secondly, in protrusion of the kidney through a wound in the loin; thirdly, in recent wounds of the kidney or of the ureter, inflicted in the performance of ovariotomy, hysterectomy, or other operations; fourthly, in suppurative lesions; fifthly, in hydronephrosis and cysts; sixthly, in calculus of an otherwise healthy kidney; and, finally, in painful floating kidney.

4. That nephrectomy is absolutely contraindicated, first, in sarcoma of children; secondly, in carcinoma at any age, unless, perhaps, the disease can be diagnosticated and removed at an early stage; and, thirdly, in the advanced period of tubercular disease.—*Am. Jour. Med. Sciences*, July, 1885.

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SATURDAY, AUGUST 29, 1885.

THE INTERNATIONAL MEDICAL CONGRESS OF 1887 AND THE AMERICAN MEDICAL ASSOCIATION.

That mind must be curiously constituted which can complacently quote, as an index of public sentiment, the direct results of its own perversions and mis-statements of facts. And still this is what we find strikingly illustrated in the *Medical News* of the 22d inst. That journal makes quotations from the *Deutsche medicinische Wochenschrift*, *Le Progrès Médicale* and the *Dublin Medical Press*. The spirit and substance of all these quotations may be briefly stated as follows: That the American Medical Association, at the meeting in New Orleans, set aside the Original Committee on the Organization of the Congress, together with all the work it had accomplished, appointed a New Committee of men selected without reference to their qualifications, and so restricted the American Membership that the Congress would "be a gathering of the American Medical Association, with a somewhat greater number of foreign guests than could otherwise be invited." These last three lines, together with many other sentences, are almost literally copied from editorials in the *News*, *Record*, and *New York Journal*. When our foreign brethren learn, as they will in due time, that they have been led by the editorials in these journals to base their disparaging comments on an entire perversion of the facts, their estimation of the character of some of those in whom they have hitherto placed much confidence will be materially altered. It is already well known, at least on this side of the Atlantic, that the American Medical Association, at New Orleans, neither displaced nor set aside a single member of the Original Committee of eight by whom the invitation was extended to the Congress in Copenhagen; neither did it, by any act or vote, nullify or set aside a single rule or regulation that had been adopted by the Committee for organization and government of the Congress, nor displace a single individual previously selected by the Committee as an officer of the Congress or of its Sections. On the contrary, the Association did set aside those members of the Committee who had been selected by the original eight chiefly from two or three cities, and put in their places a representative from the profession in each State and Territory, for the express purpose of having the Committee to make the preliminary arrangements for the Congress more fully represent the medical men of the whole United States. The Committee, thus enlarged and rendered more national in character and influence, was simply authorised to revise the work that had been previously done so far as it might deem proper. And nothing was more clearly indicated, both by speech and vote, than that the chief object of the proposed revision should be to make such changes only as would give to the preliminary organization a wider distribution of officers, and thereby make it more truly represent the 50,000 active, intelligent members of the profession of the United States, instead of having it limited largely to a select class in Philadelphia, New York and Washington, as had been proposed by the Original Committee.

There is not the shadow of truth in the statement so industriously circulated, especially in Europe, that the American Medical Association has in any conceivable way attempted to restrict the American Membership of the Congress to members of the Association, or had given any intimation to the Committee of Arrangements that such restriction was desirable. The truth is that the *Rule* for regulating the conditions of membership is still under advisement, and will not be definitely settled until the special meeting of the Committee called for September 3, 1885.

The question before the Committee is not whether the American Membership shall be restricted to members of the American Medical Association, for no such proposition has been made or entertained. But it is, whether it shall be representative, consisting of delegates appointed by the American Medical Association and its constituent State and local Societies, and by all the national organizations of special departments in medicine on the one hand, or on the other of all such members of the regular medical

profession, either in this country or Europe, as may inscribe their names on the register and take out their tickets of admission. There is no reasonable doubt but that one of these propositions will be adopted at the coming meeting of the Committee. And certainly the adoption of either of them would secure a full attendance from the leading members of the profession from all parts of our country, and give to those who may come from the other side of the ocean as cordial a reception as they have had in any other part of the world.

COMPLETE DILATATION OF THE CERVIX UTERI, AN ESSENTIAL CONDITION TO THE TYPICAL FORCEPS OPERATION.

A few weeks ago, a zealous student of midwifery, and an original thinker of prominence, wrote the following sentence with reference to a rule of practice of vital importance in midwifery:

"I regard the rule (not to apply the forceps till the os is completely dilated), long held by the ablest men, to be entirely erroneous, and capable of doing much harm to womankind and to the obstetric art. It is part and parcel, in my judgment, of those other rules, which have, by a singular want of knowledge of the great range of usefulness of the forceps, hampered mankind in its use.

"I have no doubt that Chamberlen used the forceps as Lusk does, so far as his instrument allowed him; and two hundred years after him, in the face of thousands of facts to the contrary, we are still hampering the instrument with rules invented in the closet, and handed down from writer to writer, a heritage of ignorance, as I think, in lieu of a generalization from experience.

"For myself, though my experience with the forceps is very limited, instead of regarding the dictum that they should not be used until the os is fully dilated, I take pride in stating that, so far as my recollection goes, in no case of my own was a woman ever allowed to lie in suffering and danger till the os was 'completely dilated.' When delivery was desirable, and the *os uteri* prepared for dilation, I proceeded to dilate it in a way as exactly after the manner of nature as I could conceive of, namely, by using the head itself as the dilator, and in so doing calling upon the uterus to aid my efforts."

We hope to be pardoned if we presume to suggest that a "limited experience" with the forceps disqualifies an operator for the expression of opinion upon the subject of the conditions of the forceps operation.

To avoid ambiguity in the use of terms, it may not be out of place to define our conception of the expression, "complete dilation of the *cervix uteri*." When the head descends into the cervical canal and pelvic cavity, the walls of the lower uterine segment become ultimately so far dilated that neck and vagina form one continuous canal, and the cervix is said to be completely dilated. When the head remains in the pelvic inlet, the external os may be completely dilated before rupture of the bag of membranes, but after the escape of the *liquor amnii* its walls may collapse, and present an aperture apparently passable by but three or four fingers. In reality, the os is completely dilated or dilatable.

We are very decidedly of the opinion that a serious study of the nature of the case, and a careful weighing of the opinions of those obstetricians whose views are entitled to distinguished consideration, will furnish evidence sufficient to establish the proposition that *complete dilatation of the cervix uteri is an essential condition to the typical forceps operation.* This postulate does not apply as a universal proposition to all forceps operations. There are cases—of seldom occurrence—in which, the application of the forceps is indicated when this condition is not present. To such operations, the term *atypical* has been well applied by Zweifel and others. The application of the forceps through an os not completely dilated is an operation at once difficult, dangerous and seldom indicated. The technical difficulties in the introduction of the instrument under the guidance of two or more fingers, as insisted upon by all modern authorities on operative obstetrics, are great.

Neglect of the precaution of the introduction of two or more fingers entails disastrous consequences. Hyernaux (*Presse Méd.*, xviii, 10, 1865) records a case of perforation of the vaginal wall, with escape of intestines and omentum through the vulvar orifice between the thighs. The patient was a iv-para. Another case is reported (*M. f. G. B.*, 24, sup., pp. 157-208, 1865), in which the blade passed through the right vaginal wall, and perforated the bladder. The woman died from hæmorrhage, and the surgeon was sentenced to nineteen months imprisonment. The dangers of injury to mother and child are obvious. It is a very easy matter to grasp a portion of the cervical walls between the blade and the head. A case in point has recently come under our observation. The forceps was applied to the head, resting in the mid-plane of the pelvis, through an undilated os, by an able and experienced practitioner. Together with the head, a shred of tissue, six inches long by two broad, was extracted. Upon microscopical examination this shred of tissue proved to be a portion of the uterine walls. But the risk of producing cervical lacerations of all degrees, from a mere nicking of the edge of the external orifice to rents extending through the *corpus uteri*, involving the *parametrium* and pelvic peritoneum, is of more importance. It is scarcely necessary to call attention to the fact that the laceration, *per se*, is seldom of so grave prognostic moment as the danger of puerperal infection. The idea of using the head as a dilator is as old as the history of the forceps. The

head is rarely a physiological dilator of the cervix. That function is usually relegated to the bag of waters. With the long, narrow-bladed forceps of Dr. J. E. Taylor, there is great danger of injurious compression of the fœtal head; while with Simpson's, the volume is increased.

The danger of injury to the fœtus is frequently not less than that to the mother. It is well to bear in mind that sententious remark of Zweifel: "The result of an operation is not always settled with the conclusion of the labor." Deafness and permanent injury of the *portio dura*—the results of injurious compression—come under our observation only too frequently. According to the modern idea, the forceps is an instrument with which it is practically impossible to injure either mother or fœtus. But the operation is seldom indicated. The "personal equation of error" exercises great influence in the determination of the indications for the application of the forceps. Under the direction of George Johnston, from 1869 to 1871, in the Rotunda Hospital, in Dublin, the number of forceps operation was 227 to 3,338 labors, or 1:14.7. In 1877, Lombe Atthill states that the number of forceps operations was 96 to 1,132 labors, or 1 : 11.8. It is not our purpose to investigate the motives of such operative procedures. Class instruction, Dr. Goodell's famous story of "reed-birds for supper," suggest themselves. In Austria and Germany, the instrument is seldom applied more than once in fifty or sixty labors, and the results are far more favorable. The increased mortality of the forceps operation in Dublin, and the United Kingdom generally, cannot be explained, however, simply on the ground of operative procedure when the necessary conditions and indications are not present, for the Viennese obstetricians are unusually skilful manipulators, and strict attention is paid to the prevention of puerperal fever.

If special prominence be given to the doctrines of the Vienna school, in the attempt at summarizing the opinions of authorities on operative obstetrics, it is due to the fact that the colossal material, a system of records of critical accuracy, and liberal State encouragement have combined to give that famous school a peculiar vantage-ground. We find an authoritative expression of opinion upon the subject in question in Dr. Friedrich Schauta's "Grundriss der Operativen Geburtshilfe:" "We demand, therefore, when the head is engaged in the pelvic inlet, the complete dilatation of the *os externum*, or, at least, its easy dilatability. When the head is low down in the pelvic cavity, the forceps should never be applied until the greatest periphery of the head has passed the external uterine orifice." A similar rule of practice will be found in the text-books of Carl Braun, Josef Spaeth, and Gustav Braun. This rule is rigidly enforced in the three obstetrical clinics of the Allgemeines Krankenhaus, with the favorable results, which have already been mentioned. Dr. Ludwig Kleinwächter (Grundriss der Geburtshülfe), states as an absolute condition for the application of the forceps, "The uterine os must be completely dilated." Otto Spiegelberg says: "When the external orifice is not fully dilated, the forceps should only be applied when the head is small and the lower segment of the uterus dilatable, then only under the strictest indication." Such cases, he says, may occur in eclampsia with premature labor, but they always demand the highest technical skill. (Lehrbuch der Geburtshülfe, 1882, p. 743). In other words, complete dilatation of the os can be dispensed with only in *atypical* operations.

Dr. Paul Zweifel says, in his "Lehrbuch der Operativen Geburtshülfe": "The mouth of the uterus must be completely dilated." Pajot (Travaux d'Obstétrique et de Gynécologie) says that complete dilatation of the os is an indispensable condition to all forceps operations. "Every application of the forceps," says Charpentier (Traité Pratique des Accouchements), "tried before the neck is dilated or dilatable, is an operation not only useless, but dangerous." Cazeux and Tarnier, "Obstetrics," say: "The dilatation or the dilatability of the *os uteri* is even more indispensable here than in the case of version." Playfair says: "For the safe and easy application of the instrument, it is also advisable that the os should be fully dilated, and the cervix retracted over the head." "If the os be not fully dilated, but is sufficiently open to admit of the passage of the forceps, the operation, under urgent circumstances, may be quite justifiable, but it must necessarily be a somewhat anxious one." Hodge says: "The os uteri should be fully dilated, or, at least, very easily dilatable, before the instruments are applied."

On the other hand, Schrœder, Barnes and Lusk are disposed to dispense with this condition to a considerable degree. Schrœder, however, demands that the *cervix uteri* shall have disappeared. Barnes, while advocating the application of the forceps, when the head is at the inlet and the *liquor amnii* discharged, in lingering labors, even when the *cervix uteri* is not fully dilated, criticises the Dublin rules for operative procedure (Obst. Transact., vol. XXI, p. 121). Lusk, while encouraging the practice of bringing the head into the cervix with the instrument,

to act as a dilating wedge, says: "I can only say that, with increased experience, my own practice has grown more and more conservative, and my own belief is that true wisdom requires us to abstain from even trivial operations so long as nature is able to do her work without our assistance." (The Science and Art of Midwifery, New York, 1883, p. 343).

THE MONUMENT TO GENERAL GRANT.

It is an unquestionable fact that the most fitting monument to a great or a good man, or to any one whose memory should be perpetuated by a material tangible structure, is something that will confer a material benefit to other people. More than this, it is most probable that any man, whose memory is or will be of any value to his countrymen or to the world, would, if consulted on the subject, prefer that the money spent in erecting a memorial to him should be spent in such a way as to materially benefit a certain class or classes of people, and thus indirectly benefit all.

The American people are now interested in building a suitable monument to General Grant. The subject and enterprise are of national interest, and it is highly probable that a very large amount of money can be raised for the purpose. The following, from our most esteemed lay contemporary *Puck*, is most apropos to this matter.

"We have done enough, as a nation, and badly enough, in all conscience, in the monument line. Let us to-day, in a spirit of holy humility, try to resist the temptation to make further fools of ourselves. We wish to perpetuate, in some material way, the memory of the great man who has just died. So be it. But let us not tie the remembrance of his greatness to another architectural or sculptural monstrosity. Let us avoid the memorial style in which we have hitherto made ourselves ridiculous. It is not likely that we shall ever build a good monument to General Grant, or that we shall even make a statue of him which will be artistically beautiful.

"But there is no reason why we cannot found some institution, educational or charitable, that shall hand his name down to posterity in living strength and grandeur. The monument that Peter Cooper raised for himself nas done more to keep him in grateful remembrance of the people than moulded bronze or chiseled marble could ever do. Let us not forget this when we cast about how fitly to do honor to our dead hero. And while the public may be slow in responding to a call for money to build a useless and presumably ugly monument, they will not be apathetic when we ask for their help to raise a useful, noble, vital memorial to an honored name."

It may be suggested that a free educational institution would also serve the purpose of a charitable institution. It is now quite certain that the State of Illinois, and the cities of New York and Chicago will spend quite large amounts of money in erecting monuments to the memory of General Grant. And what monuments could be more fitting than those which would not only please the eye, but also be of lasting service to Humanity? People in America have shown that they are more willing to give money to a substantial good than to objects that are of immaterial benefit, and we think that should Illinois, as a State, and New York and Chicago determine to erect useful educational or charitable institutions in place of marble or bronze monuments, there would be but little difficulty in obtaining the necessary funds. In a quite similar case no difficulty has been found in England in raising money for the Gordon Memorial Hospital (though this example is in no way meant as a suggestion). Furthermore, should the funds be appropriated to charitable or educational purposes the results would be capable of constant improvement—which otherwise would not be the case. *Puck* has made, as usual, a very wise, common-sense suggestion.

PUBLIC SENTIMENT OF THE PROFESSION.

If those journals that have lent their pages to a free publication of all the perversions of the facts regarding the Committee of Arrangements for the International Congress, that the faction of obstructionists could invent, were as anxious to inform their readers of the true state of public sentiment as they are to quote the comments of foreign journals founded on their own misstatements, they would find place for the names of more than one hundred of the more prominent members of the profession in Philadelphia, and between three and four hundred more in other parts of that State, signed to a circular directly endorsing the action of the American Medical Association, and pledging their individual support to the International Congress, as an offset to the twenty-eight eminent Philadelphians who must have the honor of starting the disgraceful work of obstruction. They would also be as quick to announce the fact that the Alleghany County Medical Society had at a full special meeting reconsidered its former vote, and unamimously endorsed the action of the American Association and its present Committee of Arrangements, as they were to herald its first hasty action.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, August 3d, 1885,

THE PRESIDENT, CHARLES T. PARKES, M.D., IN THE CHAIR.

DR. FRANKLIN H. MARTIN, read a paper on

OLEATE OF MANGANESE.

He said: There is little doubt left in the minds of therapeutists in regard to the value of manganese as a remedy in certain forms of menstrual trouble. The remedy, in the form of permanganate of potash, was first brought to the attention of the profession by Ringer and Murrell, of London, in the spring of 1883. They recommended the drug in functional amenorrhœa. Soon after this he commenced experiments with the same preparations, and published the results in the *Medical Record*, Sept. 29, 1883. To his knowledge, that was the first that anything on the subject was published in this country.

In the course of his experiments, acting on the theory that the drug produced menstruation by stimulating the menstrual organs, he was induced to give the remedy in menorrhagia and metrorrhagia dependent upon an *atonic* condition of the organ. He found, to his gratification, that it acted equally well in these conditions as in the opposite. He has also obtained good results from its administration in irregularities incident to approaching menopause. He has received very gratifying letters from many members of the profession throughout the country, who have used the drug in one or more of the conditions mentioned above, with good results.

Dr. Thomas, of New York, says of the remedy: "I think it is the best emmenagogue which has yet been discovered." Dr. Roberts Bartholow not only recognizes its power as a remedial agent in amenorrhœa, but also considers it a general stimulant, making it equally efficacious in other menstrual difficulties dependent upon an *atonic* condition. After publishing his second report on this subject, the author received a letter from Dr. Sydney Ringer, of London, in which he expressed his gratification at the result of his experiments, and in which he said: "Like you, I have found the permanganate most useful in atonic conditions," and further remarked, "I was quite prepared to learn that the permanganate is useful in menorrhagia."

Since there is no longer any doubt about the great value of this drug in the distressing menstrual difficulties, the next formidable problem for the therapeutist to solve is, How shall it be administered? The permanganate of potash, the original preparation used for experiments and administration, in any form is liable to act as an irritant to the stomach. It has, in many ingenious ways, been made into pills, but as these pills must of necessity have for their basis kaolin, or some other inorganic substance, the drug in this form is not satisfactorily absorbed. The compound tablets of Wyeth & Co., and other druggists, are objectionable in many cases of irritable stomach, because the irritating, undiluted drug comes in direct contact with its mucous membrane. On account of the many difficulties of administration, therefore, this valuable remedy has not met with the reception that is its due. Following the suggestion of Dr. Lewis L. McArthur, of this city, he succeeded in having an oleate of manganese prepared. This oleate was made for him by Edward Kreyssler, of the firm of Forsyth & Schmid, of Chicago. He says he is indebted to Mr. Kreyssler for the following statement of the mode of preparation and of the physical and chemical properties of the oleate of manganese: A solution of sulphate of manganese was made in distilled water, and to it a solution of sodium oleate was added. On mixing these two solutions gradually, and with constant stirring, a precipitate of oleate of manganese resulted. This precipitate, upon heating, changed to a putty-like mass. This was washed several times with warm distilled water, to remove the sodium sulphate, and the resulting mass was the pure oleate of manganese. It is of a light gray color, having a pinkish hue, of a sweet, musty taste, and peculiar, clay-like odor. It is sparingly soluble in alcohol, soluble in ether, chloroform, olive oil and oleic acid.

The Method of Application.—He recommends that one drachm of a twenty per cent. solution of the oleate of manganese in oleic acid be applied to the abdomen of the patient, and its absorption promoted by friction with the hand. In amenorrhœa it should be applied, if possible, every night for a week preceding the expected menstrual period, or at the time menstruation is due, and until it makes its appearance. In menorrhagia or metrorrhagia it should be applied in smaller quantities every night, until the desired effect is produced. Of about a dozen cases in which the oleate has been prescribed by him, but four had reported. The success in these four was all that could be wished. Three of the four were cases of *atonic amenorrhœa*, the fourth, irregularity due to approaching menopause.

DR. J. H. ETHERIDGE thought much advance would be made in the use of drugs if we were more careful to discover in what conditions they were beneficial. He had found this remedy useful in cases of atonic amenorrhœa with the uterus in its normal position. He had found the aqueous solution an eligible preparation, and had also used it in the form of a suppository.

DR. E. J. DOERING said he had used this remedy in some cases of atonic amenorrhœa with good results. He asked the effect of the drug upon the pregnant uterus.

DR. PAOLI had used manganese somewhat for several years in cases of menstrual disorder, with varying degrees of success. It was a useful remedy in many skin diseases. He had not used the oleate, and could not see how it acted upon the uterus, unless, possibly, by being applied at once after being freshly prepared.

DR. MARTIN closed the discussion by saying he had used the aqueous solution in very small doses; also had had the remedy put in dry papers, and swallowed with a glass of water. He had never

used it in the form of a suppository. Manganese has no effect on the pregnant uterus. The drug seems to act as a general stimulant to the uterus, causing it to perform its normal function. It might be absorbed as the oleate, and so produce its effects.

DR. JOHN BARTLETT read a paper on

LACERATION OF THE CERVIX UTERI,

in which he said his object in addressing the Society was to suggest a way and a time in which laceration of the cervix uteri may be easily and certainly detected soon after its occurrence. Directly after delivery, if the fingers be introduced deeply into the vagina up to the contracted os uteri internam, and then carried in any direction a little outwardly, the flabby and floating ring formed by the non-contracted cervix may be felt, as Guillemeau described it three hundred years ago, "like a section of large intestine."

By very carefully following the entire circumference of this ring an existing rent may be discovered. But this examination is attended with some difficulties. The patient is exhausted with her labor, and fatigued with attentions, and just now, since "it is all over," longing for rest. She is impatient of, and perturbed by this *post factum* inquiry. Her state of mind and possible expression of complaint are apt to render an examination, which the physician cannot regard as absolutely necessary, less exact and thorough than it would be otherwise. And then, the soft and floating margins of the cervix have often somewhat of an intangible feel, if the expression be permitted, gliding past the fingers like a detached clot of blood, and occasionally, in some portion of their circumference, passing out of satisfactory reach. On this account it is not surprising to hear an obstetrician say that he cannot tell whether the post-partum cervix is lacerated or not. The error of the accoucheurs who fail to recognise such a condition is that they do not make their observation of the suspected cervix at the proper time. They examine the neck actually, as has just be done mentally—alter the clearance of the uterus. The favorable moment for the examination—and that, he said, was the special point of his remarks—is just as the placenta is beginning to occupy and distend the cervix. The collar of flesh is then not floating and uncertain in feel, but stretched and expanded, forming a distinct ring, easily followed in its entire circumference. At this moment, then, just as the cervical tube is being rendered tense by the placenta mass, any laceration in it may be detected with ease and certainty. Dr. Bartlett illustrated his remarks with earthenware models turned by a potter under his immediate direction.

DR. ETHERIDGE asked the author of the paper whether he had verified a case by speculum examination after discovering it in the way he had illustrated in his remarks.

DR. PARKES said he had great difficulty in detecting laceration after delivery, on account of the relaxed condition of the parts. He thought the suggestion of Dr. Bartlett as to the way to obviate this difficulty was a good one.

DR. DOERING inquired as to the size of lacerations he had found.

DR. BARTLETT concluded by saying that he had verified cases of laceration discovered in the manner proposed by him. The largest laceration he had found was one and a half inches in length, and the end of the little finger could be passed into it. In one case he encountered considerable hæmorrhage from such a rent; and this may be the cause of continuous loss of blood when the os is well contracted.

Stated Meeting, August 17, 1885.

THE PRESIDENT, C. T. PARKES, M. D., IN THE CHAIR.

The PRESIDENT reported

A CASE OF OVARIOTOMY.

In February, 1885, the patient, Mrs. R., aged 43, ten children, came under the care of Dr. O'Connell, of Ponca, Nebraska, who diagnosticated ovarian tumor. Dr. Parkes was requested to perform ovariotomy. He found the patient in fair condition generally, hopeful and clear-minded. The abdomen was glistening with distension. Fluctuation was extremely well marked in all directions and in all positions of the patient. No resonance anywhere. No umbilical hernia. Her trouble dated from August, 1884, when a small tumor was perceptible in the right side. It gradually increased in size until January 17, 1885, when local peritonitis set in and was followed by rapid distension. Ovariotomy was done March 24, 1885. The patient had been placed in a bright light and an incision four inches in length made in the abdominal walls, midway between the umbilicus and pubes, to the peritoneum. There was no peritoneal fluid, but fortunately the bright light enabled me to distinguish between the peritoneum and the sac of the tumor, so closely were they applied to each other by adhesions. The adhesions were broken down so far as the hand could reach. A trocar was next plunged into the tumor and about 18 quarts, or about 36 pounds, of a dark, sanguineous fluid evacuated. The sac was enormously distended and very thin. After the most of the contents were drawn off, the opening made by the trocar was closed by Nélaton's forceps. The sac was still adherent extensively laterally and posteriorly. These were destroyed as completely as possible, and yet it was impossible to draw the sac through the opening or to reach the deeper adhesions to the pelvis and flanks. Finally a free space was found in the right iliac fossa, the sac turned up and the pedicle found and secured. The greatest difficulty was found in separating the sac from the intestines, which were universally adherent to the posterior surface of the sac, and could only be reached by turning the tumor upwards after division of the pedicle. A firm, broad adhesion to the stomach at the top of the cyst could not be separated, so a portion of the outer wall of the cyst, corresponding in size to the adhesion, was dissected from the tumor, and in that manner the entire tumor was finally removed. The pedicle was about two inches long and very slender, and came from the right side of the uterus. It was no-

ticed in the specimen exhibited that the sac was almost entire, and that it was not smooth and glistening, but rough from the adhesions, and at lower part there was an indurated mass about the size of a large orange. The sac and mass together weighed but three pounds. There was a vast area of oozing surface from which the adhesions had been torn, yet very little blood was lost. The abdominal cavity was thoroughly sponged, a drainage tube introduced, and the wound closed by six silk ligatures.

The length of the incision, after the removal of the tumor, was but two inches. The patient progressed favorably until the fourth day, when she was attacked with severe and persistent vomiting, rising temperature and pulse. Stercoraceous vomiting ensued and increasing exhaustion until her death, on the sixth day, pointed toward bowel obstruction.

The points to be noticed in this case are the great extent of the adhesions, the only clear space being in the right iliac fossa, the only way to reach them being to ligate and separate the pedicle and then turn the sac upwards; the small size of the pedicle to such a large tumor. It seemed to be approaching very near to the conditions of a free ovarian tumor explained by Mr. Doran, who explains their presence by atrophy and abruption of the pedicle taking place when there are very vascular adhesions of the tumor to other parts, through which nourishment is carried on. It was also noted that this patient went along all right for five days, them symptoms of intestinal obstruction set in. The question was raised, whether it is not the urgent duty of the surgeon in such a case to reopen the abdominal wound and search for the seat of the obstruction and remove it.

The PRESIDENT also reported

A CASE REQUIRING BATTEY'S OPERATION.

Miss M., age 17, single, an American, had suffered greatly from pain referred to right iliac fossa, increased during menstrual periods, for one year previous to placing herself under his care, January, 1885. She was already an invalid. Examination *per rectum et vaginam* disclosed retroversion of the uterus, accompanied with a dislocation of the right ovary into the Douglass *cul de sac*. Medical treatment having failed, Battey's operation for the removal of the prolapsed ovary was done June 2, 1885. Nothing unusual occurred during the operation, and the patient convalesced rapidly. The temperature never rose above 99° The dressing placed upon the wound was the dry dressing consisting of iodoform, antiseptic gauze and a layer of absorbent cotton. This dressing was not removed until the seventh day, when the stitches were removed. The line of cicatrix was perfect throughout. There was no formation of pus. The blood around the stitch-holes was dry and scaly. The case was remarkable, principally, for the absolute freedom from any discomfort during the recovery from the operation. It was the first example of dry wounds Dr. Parkes had ever seen. The patient was out in three weeks. The uterus was not fastened in its new position, and is slightly antiflexed, but not anteverted. The morbid specimen exhibited is the ovary much enlarged with two small parovarian cysts developed on it.

He then reported

A CASE OF DOUBLE OVARIOTOMY.

Mrs. P., æt. 44, and had borne three children. She complained of a tumor growing for the last two years over the situation of the gall bladder. February 15, 1885, Dr. Parkes made an exploratory operation, and after cutting into growth, out popped this biliary calculus, about one inch long and bean-shaped. Nothing further was done, and the tumor began to disappear. However, during the manipulation of the abdominal walls he discovered two small tumors in the pelvis, in the region of the ovaries, which were supposed to be ovarian growths, but were not disturbed. But they rapidly grew in size, and were removed by laparotomy on June 16, 1885. The bowels had been moved two days previously. The abdominal incision disclosed the larger of the two tumors now shown, the larger filling the anterior inlet of the pelvis and held down by slight adhesions. These were broken down and the mass removed. It was found to be the degenerated right ovary. The pedicle was extremely short and was with difficulty secured. It was tied, divided, and the stump dropped. Likewise the left ovary was removed and found to be degenerated. The tumor being smaller and pedicle longer, no difficulty arose. Finally, in sponging, quite free bleeding was noticed from the right pedicle. It was again transfixed close to uterus and all hæmorrhage ceased.

It was noticed that the sigmoid flexure of the colon was distended with fæces, and this condition was remarked as unaccountable, from the fact that free catharsis had been obtained only two days previously. The patient did nicely for ten days after the operation, with the exception that no action of the bowels could be secured by medicines or enemata. A careful digital examination revealed, high up in the rectum, a stricture which could not admit the end of the index finger. The slight opening was surrounded on all sides by a thick, dense deposit of abnormal growth. The question of relief seemed to stand between forcible dilatation of the stricture and the establishment of an artificial anus. July 30, he dilated the stricture so as to admit three fingers in a cone shape. The tissue was very dense. It broke down with difficulty, and the induration extended up the bowel quite two inches. After this was done the scybalous mass was easily removed. By the next day the bowels had moved several times, freely, and tympany disappeared. As Dr. Parkes had to leave the city July 5th, the patient was left in the care of Dr. R. G. Bogue, who subsequently told him the patient had died suddenly on July 10th, with symptoms of perforation of the bowels. Two inquiries arise:

1st. Is it not well to examine the rectum thoroughly before operations, in all cases?

2d. Would the establishment of an artificial opening, as soon as the nature of the obstruction was determined, have given a better result in the case reported?

DR. PARKES also exhibited a specimen of *epithelioma of vulva*, which he had removed by Paquelin's cautery.

DR. ETHERIDGE opened the discussion by asking how far we could go in removing portions of the intestine in cases of obstruction. He said that he had recently had a trying experience in case of ovarian tumor, in which, after the operation, the patient reacted well, but in 48 hours vomiting came on, which soon became stercoraceous and the patient died. On post-mortem examination, the whole of the large and most of the small intestines were greatly distended with flatus. A short piece of the small intestine, just where it entered the large one, was collapsed, and with great difficulty could any of the flatus be forced through it. He asked the author of the paper if he would have had the courage to have removed this portion of the intestine.

DR. FRANKLIN H. MARTIN said he had been very much instructed and entertained by Dr. Parkes' well detailed report. It had impressed him with three points or lessons that were dwelt upon in a recent article by A. Vander Veer, M.D., of Albany, N. Y., in the July number of the *American Journal of Obstetrics*, citing "personal observations on the work of Lawson Tait," at his private hospital in Birmingham, England. These three points, which to his mind explain, to a great extent, the wonderful results of that great operator, are:

1st. Cleanliness, pure air and sunlight.

2nd. Efficient, good-looking nurses.

3rd. Close personal supervision, and attention to after-treatment.

In the first case that Dr. Parkes reported to-night good light had saved him from going directly into the sac of the cyst in attempting to enter the peritoneum. This case also, he suggested, might have fared better had he been present to have given personal attention to the movement of the bowels, thus, possibly, removing the obstruction which was apparently present. In the third case, if personal attention had been given to the bowels sooner, the obstructions due to the stricture might have been removed and the ultimate result been more favorable. Here the nurse was at fault. Again, in the third case, if personal attention had been possible, the early operation of artificial anus, as Dr. Parkes suggested, might have influenced favorably the ultimate result.

DR. WELLER thought that dilatation of the rectum was the only feasible method of relief in the case in which a malignant growth was formed in the lower bowel. An operation for an artificial anus would have been difficult under the circumstances.

DR. S. H. STEVENSON asked why not open the sigmoid flexure and remove the accumulation from it at the time of the operation?

DR. PARKES closed the discussion by saying he would remove a portion of the intestine if it presented the only way of saving the patient's life. If in a few days after the operation symptoms of obstruction should come on, he would reopen the wound and seek for the seat of the trouble. He said that his theory of the best mode of procedure in these cases was gaining ground in the profession every day. Dr. Hamilton, of New York, lately reported a case of a gun-shot wound of the abdomen, in which there were eleven perforations of the small and four of the large intestine. These were sewed up and the patient recovered.

The cause of the constriction in the case reported by Dr. Etheridge was probably due to an obstruction of the arterial supply to this part of the intestine, causing it to contract. Little good would come from an operation in this case. He thought an artificial anus might have been made in the second case referred to in his paper, though the bowel was distended. In these cases only a small opening was necessary. This might have prolonged the patient's life a short time. The cause of death was perforation of the bowels resulting from an ulcer incident to the dilatation of the rectum. He generally used saline cathartics to open the bowels. He would not have been justified in removing the accumulation from the sigmoid flexure at the time of operating, on account of the additional shock to the system it would have caused.

DR. HENRY T. BYFORD then read some

OBSERVATIONS ON THE CAUSE AND TREATMENT OF INFANTILE ECZEMA AND ALLIED ERUPTIONS.

He said, in the winter of 1880 he had been called to attend Mrs. R. in her fifth confinement. Two of her other children were dead, and two more, apparently healthy at birth, had died in convulsions before they had completed one year of life. Both of the last two had suffered from scabby eruptions and had become somewhat emaciated, but had not been considered syphilitic. The child born at this time, seemingly healthy at first, soon broke out with what appeared to be an ordinary eczema pustulosum. This eruption occurred on the scalp and on different parts of the body. The child suffered from progressive emaciation, and at the age of three weeks it would easily have been mistaken for a case of struma, to be treated with cod-liver oil. The patient was quickly relieved by calomel in minute doses and mercurial inunctions.

The next case referred to was that of Augustus G., seen first in the summer of 1876. The child had pustular eczema of the scalp, great nocturnal restlessness, and suffered from progressive emaciation. There was no cause to suspect syphilis from the appearance of the child, but the father acknowledged to what seemed to be a perfectly cured attack of syphilis. The eczema rapidly disappeared, and the infant gained in flesh upon calomel powders and mercurial inunctions.

In contrast with these syphilitic cases, he next mentioned the case of E. H., a child one year of age, fat and well nourished, with no possibility of a syphilitic taint, but suffering from an eczema of the head, which spread over the body in patches. Prolonged local treatment had not improved it. The disease soon disappeared under the use of one-fifth grain powders of calomel, given twice a day, and an ointment composed of a dram of carbolic acid in an ounce of oxide of zinc ointment. The child had been overfed and was put upon a restricted diet. There was no return of the disease.

The next case was one in which the eruption invaded the eyelids, and caused great conjunctival sensitiveness. By the use of quarter-grain doses of calomel, given twice a day until a laxative effect was produced, then once a day, combined with the external application of carbolized oxide of zinc ointment and a borax eye-water, the condition of the patient was soon greatly improved.

He had succeeded in relieving many other severe cases of eczema by the use of calomel, and it made no difference on what part of the body the eruption occurred, or what the condition of the patient was otherwise. That eczema so frequently occurs in infancy, the large size and great activity of the liver in early life, and the striking action of calomel, had led the author to associate indigestion with infantile eczema as cause and effect. In syphilitic cases the alterative powders often produced an amelioration in the skin trouble sooner than they could through their direct action upon the blood poison. In all cases it is important to regulate the diet. He knew of no authority who had considered derangements of the liver, and its accompanying disorders, as the chief cause of eruptions of the skin, or who had recommended calomel as the chief remedy for its cure. As calomel produced such prompt relief, and as improvement of digestion usually followed rather than attended the action of the remedy, one is led to believe that the cure is brought about not merely by improving digestion, but by a removal of waste-irritating matter from the system, and from the great efficiency of mercury over other laxatives. He believed that the irritating materials are not only in the retained fæcal matter, but also in the blood—the products of imperfect digestion, assimilation and excretion. He was led to the use of calomel in eczema from noting its good effect in cases due to syphilis, and as these patients improved so well under its use, he next tried in cases where syphilis was only suspected, and then in all cases. The usual dose was from one-quarter to one-eighth of a grain powder, given twice a day, the dose to be reduced if too great irritation of the bowels was produced. In cases of children over two and a half years of age, in order to avoid salivation, he usually gave purgative doses of calomel every six or eight days, and trusted to diet and other remedies in the meantime.

In the discussion Dr. E. J. Doering said he had not used calomel in eczema, but had had good results from the use of corrosive sublimate. He intended to use calomel after this in such cases, and he thought nothing better could be found to use in chronic cases.

Dr. J. Zeisler remarked that he was very much interested in this paper, and especially to hear that calomel was useful in eczematous skin diseases. He had always held the view advocated by Hebra, that eczema was caused by external causes, and required external applications for its cure. Calomel might be of use in cases due to syphilis. He would not use blue ointment on young children. He asked whether it would not be best to use some external application in cases where there were thick masses of crusts covering the diseased part, and also whether the author of the paper had found salicylic acid useful in this disease.

Dr. C. W. Purdy thought retained excreta a cause of eczema, and called attention to the close relation existing between the intestinal tract and the skin, the condition of the one affecting the other. He had seen cases cured by the use of calomel, and would favor this treatment.

Dr. J. A. Robison said that Dr. Byford had found mercury beneficial in syphilitic and non-syphilitic cases, probably because, given in small doses, it was a general tonic, as iron or cod-liver oil, increasing the number of red blood corpuscles and enriching the blood. Thus it counteracted any dyscrasia present.

Dr. Byford concluded by saying that Hebra was doubtless right in saying eczema is caused often by external causes, but in some cases it was clear to him that the disease is due to causes arising within the system itself. In later years Hebra had modified his ideas of this disease somewhat. Although eczema could be cured by external applications, when so treated it is very apt to return. It is not so when removed by the use of calomel. External medication would often hasten the cure. He did not use salicylic acid. He believed that calomel in these cases acted as an agent causing eliminations as well as being a tonic.

STATE MEDICINE.

GOOD HEALTH RESULTS FROM SANITARY WORK.

Sanitary authorities have claimed that the sanitary work which they have recommended to be done as a preparation for cholera,—such as preventing and abating nuisances; attending to drains, sewers, privies, and cesspools; cleaning up generally, and unusual carefulness in regard to foods and drinks,—would reduce the sickness and deaths from other diseases, even if cholera did not come. The weekly reports for July, 1885, to the Michigan State Board of Health, by physicians in different parts of the State, indicate that this claim is being realized in Michigan, so far as relates to the lessened sickness,—it having been lessened from nearly every disease, and greatly lessened from fevers and from diarrhœal and other diseases believed to be especially influenced by sanitary conditions; and this is true notwithstanding the meteorological conditions in that month were rather more than usually unfavorable to health. It is proper to state, however, that the sickness in any month is influenced by the meteorological conditions in the preceding month, and that the meteorological conditions in June, 1885, were favorable to health.

Observations in Michigan for many years have shown that in July the meteorological conditions especially unfavorable to health are: High temperature, excessive humidity of the atmosphere, and deficiency of ozone. The Bulletin of Health in Michigan, July, 1885, says: "For the month of July,

1885, compared with the average of corresponding months for the seven years 1879–1885, the temperature was slightly higher, the absolute and the relative humidity were more, and the day and the night ozone were less."

"Compared with the average for the months of July in the seven years, 1879–1885, remittent fever, intermittent fever, dysentery, consumption of lungs, cholera infantum, diarrhœa, cholera morbus, measles, and whooping-cough, were less prevalent in July, 1885."

A large part of this decrease in sickness has undoubtedly been due to the medical and sanitary journals and newspapers, which have constantly kept before the people the necessity for sanitary work and the facts as to the spread of cholera in Europe.

It remains to be seen to what extent efforts for the exclusion of cholera from this country, and the general preparation for cholera by Boards of Health and the people, shall prove effectual; but even if cholera shall not be entirely prevented, there will remain the belief that the measures which have so greatly decreased the sickness from other diseases, cannot but have had their influence in decreasing it; and if cholera does not occur in this country it seems quite probable that, by reason of the suffering elsewhere, there may be as many cases of serious sickness prevented in this country as there have been cases of cholera in Europe. But this may not continue without continued vigilance and effort.

Health in Michigan in July, 1885, compared with the average in July for the seven years, 1879–85:

Diseases arranged in order of greatest diminution of sickness in July, 1885.	Per cent. of Reports stating Presence of Disease.		Per cent. of Reports more (*) or less (†) in July, 1885, than the average for July, 1879–85.
	In July, 1885.	Average in July, 1879–85.	
Remittent fever	30	51	*21
Dysentery	15	32	*17
Intermittent fever	65	82	*17
Consumption of lungs	48	63	*15
Cholera infantum	20	33	*13
Diarrhœa	62	74	*12
Cholera Morbus	39	49	*10
Measles	8	17	* 9
Whooping-cough	14	22	* 8
Pneumonia	10	16	* 6
Typho-malarial fever	10	15	* 5
Diphtheria	11	16	* 5
Bronchitis	41	46	* 5
Rheumatism	59	64	* 5
Inflammat'n of kidney	17	21	* 4
Scarlet fever	11	14	* 3
Typhoid fever	6	8	* 2
Membranous croup	1	2	* 1
Small-pox	0	1	* 1
Inflammat'n of bowels	16	17	* 1
Influenza	18	19	* 1
Erysipelas	21	22	* 1
Neuralgia	58	59	* 1
Puerperal fever	6	6	—
Inflammation of brain	6	6	—
Cerebro-spinal menin's	8	5	† 3
Tonsilitis	36	32	† 4

It will be seen that there was less sickness than the average for July from nearly every disease reported. From only two, cerebro-spinal meningitis and tonsillitis, was there an increase.

FOREIGN CORRESPONDENCE.

LETTER FROM PARIS.

(FROM OUR OWN CORRESPONDENT.)

Microbes of Mumps—Post-phenomena of Decapitation—Bust of Guéneau de Mussy—The Cholera in Spain—Dr. Ferran.

That mumps is a contagious as well as an infectious malady has long been known, but what the nature of the contagium was, was not so well understood. Dr. A. Ollivier, Physician to the Children's Hospital in Paris, has made some researches with a view of ascertaining the correctness of the results previously obtained by Drs. Capitan and Charrin, who had been occupied in the same line of research. Like these two experimenters, Dr. Ollivier discovered in the divers liquids of the economy, but principally in the blood and in the urine of patients suffering from mumps, micrococci of a special form, isolated, or united together in pairs or in the form of zoöglœa, also batonnets or rods similar to what are found in the saliva, but less numerous. These results were constantly obtained in patients suffering from mumps. Analogous researches were made on children in health, and the results were absolutely negative, a fact which shows that there is something specific in the disease called mumps, and the presence of microbes in the saliva and other liquids, would constitute an important element in the diagnosis of this affection.

The contagion or infection may be effected either by the air passages, or by the salivary glands. In these two hypotheses, it will be understood that the period of incubation will vary according to the number of microbes in the organism, and the power of resistance of the subjects. This theory would equally explain the appearance of sub-maxillary adenopathy which often follows mumps. It at the same time explains the swelling of the testicles or of the ovaries which used to be attributed to metastasis, a term that is becoming obsolete, as it is now admitted that the phenomena co-existing or immediately following the principal malady are merely other manifestations of the same morbid condition which originally gave rise, as in this case, to the parotitis. If these organs are affected, it is no doubt owing to the quantity of microbes, or to the intensity of their nocive influence. The elimination of the microbes is effected by the urine, and may in this way give rise to albuminuria. It may thus be seen that these phenomena would afford a rational explanation of the symptoms or of the various complications of the malady under consideration.

As the development and propagation of mumps are attributed to the presence of these micro-organisms, mumps must be looked upon as an infectious or contagious malady, and should therefore be classed with small-pox, measles, scarlet fever, etc., and hence the absolute necessity for establishing isolation wards for patients so affected. This interesting communication was made at a meeting of the Paris Academy of Medicine about a week ago, and it was made over to the Commission of Hygiene for examination, as Dr. Ollivier was a candidate for the membership of the Academy in that Section.

On July 2 a man by the name of Gagny was guillotined at Troyes for murder. Fifteen minutes after the execution, transfusion with blood drawn from a dog was practised through the carotid arteries in the detached head. In exciting the hemispheres the following phenomena were observed: contractions of the eyelids, movements of the lower jaw; effects that were noticed for the first time on the head of Gamahut, who was guillotined in May last. Reflex movements were obtained by exciting by means of an electric current divers nerves of the face and of the hands, as well as movements of the heart twenty minutes after the execution. The experimenters drew particular attention to one circumstance: the heart was blocked up by clots of blood, a phenomenon never before observed in these cases. The conclusion was that the circulation of the blood was probably arrested some seconds before the execution, and what gave rise to the supposition was that Gagny, on approaching the scaffold became quite livid in the face. It is supposed that at that moment the circulation was completely arrested.

A bust to the memory of Dr. Noël Guéneau de Mussy is to be placed in the Hôtel Dieu. A subscription is being raised for the purpose by Drs. Féréol, Fernet and Huchard, who were formerly pupils of the lamented deceased gentleman.

According to reports just received in Paris, the cholera is committing great ravages in Spain, particularly at Valencia and Aranjuez. The panic is such that the people are leaving in great numbers, and those that remain are so bewildered that they are unable to attend to their usual occupations. Even the pharmacies are closed, supplies are exhausted, and the peasants refuse to take in any more to the infected towns. Commerce is arrested, and what adds to the distress of the agriculturists is the interdiction by the French government of the importation from Spain of fruits and vegetables grown on the surface of, or under the soil.

It appears that the glory of Dr. Ferran, of Valencia, who has made himself famous by his inoculations against cholera, will soon be on the wane, as it has been discovered that the method introduced by him as a prophylaxy against the disease is of no value. Moreover, he has brought himself in disrepute by refusing to communicate unreservedly his mode of procedure, and the nature of the liquid he is employing for these inoculations.

The mission from France, composed of Prof. Brouardel and two assistants, was rather cavalierly received by Dr. Ferran, and the members have returned to Paris quite indignant. Professor Brouardel has sent in his report to the Minister of Commerce, by whom he was delegated on this important mission, and he also read it at the Academy of Medicine on Tuesday last. Space will not permit me to enter fully into the report, but I may mention that Dr. Brouardel stigmatizes Dr. Ferran's inoculations as a purely commercial speculation, and his secrecy is regarded as unworthy of a member of the profession to which he belongs.

A. B.

Paris, July 10, 1885.

DOMESTIC CORRESPONDENCE

THE INTERNATIONAL MEDICAL CONGRESS.

Dear Sir:—In an editorial in your issue of Aug. 15, it was stated, on what authority I do not know, that I had withdrawn my declination of the secretaryship of the International Medical Congress of 1877, and consented to assume that office. The truth is that up to the present moment no official notice of such nomination has been sent me, nor has any publication of it been made, to my knowledge, except in the *Medical News*, for July 4 I do not, however, wish to make any point of this, but beg that you will afford me space for a plain statement, as brief as I can make it, of the facts in regard to this matter.

On or about the 1st of June, the chairman of what is now known as the enlarged committee told me that Dr. Billings would probably decline the office of Secretary-General, and asked me if, in that case, I would accept the nomination. I told him I would not seek any office, but that if it should appear to be for the promotion of harmony and of the success of the Congress, and the nomination were offered me, I would seriously consider whether I could undertake the work.

After the enlarged committee had met in Chicago, a meeting of physicians was called here to receive a report of what had been done. I was at this meeting for a few minutes only, and did not hear the report, or know that it concerned me. Subsequently, I was told that my nomination as Secretary-General had been announced, and that the impression had been conveyed that I had been a party to ousting Dr. Billings in my favor—in other words, that I had intrigued to obtain a place not vacant. I have since been told by the Secretary of the committee that my nomination came from an outside source, and without any prompting on the part of those with whom I might have been supposed to be in league. How any one who knew me should think me capable of action so completely at variance with my whole life, I could not and cannot understand. Yet I found myself under this imputation, and felt compelled to subscribe my name to the protest of June 29, lest my not doing so should give color to the idea that I had so schemed.

There was another reason, not of a personal character, for my joining in the protest. The enlarged committee had adopted a rule which limited the conditions of membership, so far as Americans were concerned, while it left to foreigners free and untrammeled admission. Of this I could not approve. I at once wrote to the Secretary of the Committee, and declined the nomination as Secretary-General, in advance of official notification, on the grounds, that I was informed that Dr. Billings had not intended to resign, but had done so only because of the action of the enlarged committee; that the committee originally appointed had resigned; and that it was likely that the change of management would cause forfeiture of the foreign support of the Congress, as well as of much of that expected from the profession in this country. This letter I have not withdrawn.

When I understood that there was hope of a compromise being effected in regard to the matters in dispute, and the propositions looking thereto were shown me, it seemed to me that they were faulty in that they dealt with the American membership only; and I ventured to submit one simply defining the conditions upon which any one, American or foreign, might come in. In handing this to Dr. Shoemaker, I gave him also a note of explanation, in which I said that if anything better was offered, I would gladly accept it. So far as I know, this was the only expression of mine which could be construed into a withdrawal from my former position.

My own conviction is, that it is contrary to all precedent for the American Medical Association to assume any control of the management of the Congress, which is a body by itself, and the members of which will be in no sense the guests of the Association, or subject to it. Were I Secretary-General of the Congress, I should not consider myself the appointee of the American Medical Association, nor responsible to it in any degree.

And while it is eminently proper that the profession all over the country should be welcomed to membership in the Congress, and to a full share in its proceedings, the Association does not seem to me to be, in its present form, a sufficiently representative body to undertake to insure this, even if it could properly claim the right to do so.

I trust that you will bear with me in what is perhaps the wearisome length of this statement of facts and opinions; but it has seemed to me to be due not only to myself, but to those who have been kind enough to consider me worthy of nomination to office in the Congress.

No one can regret more than myself the prospect of wreck of a scheme in which the credit of the American profession is so deeply involved; and to avert it, I would gladly do all in my power, but cannot sacrifice my personal honor, or stifle my convictions. I am, sir, Very respectfully yours,

JOHN H. PACKARD,

1924 Spruce St., Philadelphia, Aug. 19, 1885.

[We received two communications from Philadelphia, each stating that Dr. Packard had withdrawn his resignation accompanied by no explanations or conditions. These were the authority on which we made the announcement in the JOURNAL. We have since learned from our correspondent that Dr. Packard's proposition to withdraw his resignation was based on certain conditions concerning the Rule relating to the admission of members of the Congress, as shown in the above letter. But as those conditions were already under consideration by the Committee of Arrangements and sanctioned by a large proportion of the members, our correspondent regarded the conditions as substantially complied with. We certainly had no desire to misrepresent the position of Dr. Packard in any possible way. Neither do we think that our correspondent had any such intention, and we cheerfully give space to Dr. Packard's letter in full.—EDITOR.]

LACERATION OF THE PERINEUM.

Dear Sir: An article entitled "Laceration of Female Perineum," in a recent number of the JOURNAL, by H. V. Sweringer, A.M., M.D., induces me to state my views on the subject, inasmuch as he recommends that this accident be left to nature, or deferred to a more convenient season, which is, in my opinion, unsurgical. His belief that that woman never lived who, at full term with her first child, did not have some laceration of the perineum or fourchette, is certainly very remarkable. I certainly have seen many lacerations, for I have for many years made a practice of making ocular examination of every case of labor as soon as the placenta has been delivered, and I am quite as certain that I have very frequently seen the fourchette escape entire in primiparæ at full time, even after the use of the forceps. Extensive laceration will sometimes occur, whether there is skilled attendance present or none, and he who recognises such an accident, and fails to repair it at once, or within twenty-four hours, is, in my opinion, very culpable.

The objections urged by Dr. Hamilton, and quoted by the author of the paper—"that the operation at best is liable to fail," I question; "and is made under many surgical disadvantages, and when the patient, both mentally and physically, is in the worst possible position to bear it," I admit; but what are anæsthetics for if not for just such moments, when a few inhalations of ether will render her unconscious of pain. I cannot understand how the vulvar fissure is to regain its normal condition unless the surfaces, while raw, are coapted and retained in a surgical manner by sutures or pins. It seems to me that no medical man of experience who examines women will deny that women who go with this accident untreated are deformed, and suffer a great variety of evils in consequence thereof, which it is unnecessary to specify.

The argument urged, that immediate union is difficult to obtain on account of the discharges, does not hold good. If a proper position be maintained, and the limbs moved synchronously, flexion and extension may be indulged in as frequently as the patient desires, so long as both limbs are moved together, and this may be ensured if the knees are kept bandaged together. If necessary, the patient can be kept for a few days absolutely prone, which will entirely prevent lodgment of discharges in the wound, and, to a great extent, contact with it. I have practised this in several cases, with perfect success, where the women had the courage to obey instructions; and out of a large number of cases of immediate operation by sutures in my hands, there has not been a single failure to unite.

The prone position I consider of great importance to obtain the desired result, and this is not so very hard to bear if bolsters and pillows are dispensed with. Sutures of carbolized silk are more easily introduced, more comfortable to the patient, and answer the purpose in my hands as well as metallic sutures. Lint, saturated with carbolized oil, prevents septic condition. The bowels may be moved

daily without injury to the parts. I would urge upon physicians the importance and necessity of making ocular inspections in all cases— at least, where there is a suspicion of lesion, and repair it at once. A large curved needle and some very coarse carbolized silk can be carried in one's pocket-book, without trouble, and will be ever ready.

Very truly yours,
R. B. Bontecou, M D.

Troy, N. Y., Aug. 20, 1885.

MEDICAL POLITICS AND THE INTERNATIONAL CONGRESS.

Dear Sir: The *New York Medical Record* appears to be the most prominent mouthpiece for the disaffected and eminent men who are specially known to European medicine. It is not a little singular that the *Medical Press* and the *Lancet*, of England, should only know these few disaffected but eminent physicians. The medical men of this country know that Dr. A. Flint, Sr., Dr. Flint, Jr., Dr. L. A. Sayre and Dr. Frank H. Hamilton have done more for American medicine and surgery than the majority of the malcontents who appear to be better known to British journals than to the American profession.

It may be possible that our friends on the other side of the water do not know that we have almost sixty millions of people and about ninety thousand medical men of all grades; or, in round numbers, one physician to every six hundred inhabitants. In fact, the supply is greater than the demand. It may be fairly stated that we have thirty thousand charlatans, including homœopaths, eclectics, etc. The American Medical Association has excluded the above-named named classes from membership in its body. Self-respect, as well as the dignity of the American profession, should lead every medical man, both at home and abroad, to view with disfavor and contempt every effort, on the part of a few, to give these men a place in the International Medical Congress of 1887. These are the only men who dive into "medical politics," with the exception of a few specialists in New York, who have made a code to correspond to their professional dignity.

Probably the profession abroad is not aware that we are almost destitute of laws regulating the practice of medicine, and that there are only three or four States in the Union in which physicians are required to pass an examining board in order to obtain a license to practise medicine and surgery. There are over one hundred medical schools in this country, and four-fifths of them grant a diploma for an attendance of two sessions of from four to six months. It may be readily understood, from the above statement of facts, that the American Medical Association, in dealing with the question as to who shall attend the International Medical Congress in this country, has the legitimate right to exclude men who practise "isms," or those who claim the privilege of consulting with them, to the detriment of the profession, however eminent they may be. Wherever scientific medicine is practised the name of Sir James Paget is known. Is it to be supposed that he would feel honored in hobnobbing with a celebrated "herbalist," or with the eminent homœopath, Dr. Argendank, whom the *Medical Record* wishes to advertise in its issue of July 18, 1885.

Yours respectfully, J. F. Jenkins, M.D.

Tecumseh, Mich., August 25, 1885.

BOOK REVIEWS.

Hay Fever. Its Etiology and Treatment. By Morell Mackenzie, M. D., London. Third Edition. London: J. A. Churchill, 1885. (Autograph copy.)

Among the many interesting communications to the profession upon this subject, none are more concise and yet so comprehensive as this. Each of Dr. Mackenzie's works is a model of literary ability and scientific research, and this one is fully up to his standard. Preferring the simple term "hay fever" to the many "magnificent titles" suggested by others, the author at once presents the history and progress of study of the disease, citing as the first detailed account the cases mentioned by Bostwick, in 1819. The historical part of such a work is by no means the least instructive, and in this the bibliography is complete, while throughout the whole narrative one can easily see the patient elimination of conclusion and fact from early hypothesis and theory.

As to the etiology, after analyzing the views of others, Dr. Mackenzie frankly states that the predisposing cause is the possession of a peculiar idiosyncrasy, but upon what that idiosyncrasy depends is quite unknown. He does not believe it mainly due to chronic disease of the nose, because so few of the many sufferers from chronic catarrh have hay fever, and because most of those who suffer from hay fever appear to be perfectly healthy as regards the nose except during the short period of acute attack. The circumstances which influence this idiosyncrasy are considered in detail. As to the race, it is the English and Americans who are almost the only sufferers from this complaint; in temperament nearly all belong to the active, energetic class of so-called nervous organization. One of the most singular features of this complaint is that it is almost exclusively confined to persons of some education, and generally to those of fair social position. Dwellers in town are much more prone to hay fever than those who live in the country, and many more men than women suffer from the disease.

Dr. Mackenzie gives emphasis to the powerful influence of heredity. In twenty-seven of sixty-one cases, one or more near relatives had suffered in the previous generation, and he several times had treated a father and child at the same time. In keeping with this the writer had under his care last autumn father, mother and son from one family, all the victims of hay fever. The exciting cause is, without doubt, our author says, pollen; the essential factor in the cases of those who possess the peculiar predisposition. The proposition that hay fever depends upon gross structural changes within the nose, is not endorsed. "Though in some of the American cases morbid conditions, such as hypertrophy of portions

of the turbinated bones, and chronic rhinitis, have been found, such cases will prove in the end, I believe, to be the exception rather than the rule. I have treated hundreds of cases of chronic diseases of the nose who have never been affected with hay fever." Dr. Mackenzie also refers to patients who, having been operated on by others in accord with this theory, were afterward found by him to have received no benefit. This is not in harmony with our best American authorities, although their views are fully discussed. The true cause, the author says, after quoting Blackley's experiments, is the action of the pollen on the mucous membrane. How? By the passage of the pollen granules—which are only one-tenth the size of the blood corpuscle—into the blood vessels by actual penetration of the walls. Hence the *malaise* which is experienced in hay fever may be due to the presence of this granular matter in the general circulation. If Mackenzie is right in this, we may not expect positive cures from any operative interference in such cases, for though by the galvano-cautery and snare the ability of the nasal mucous membrane to receive the impression necessary to produce hay fever, is limited, yet the conjunctiva and the mucous membrane of the whole respiratory tract remains, and we know that these become affected, not, probably, because the nose is affected, but yielding to the same influence, though, generally latter.

While we may know how the pollen so quickly irritates the mucous membrane of some, we do not know why; and as no special condition of the seat of disease seems to explain it, we are forced to the conclusion that an idiosyncrasy exists, *i. e.*, some condition which renders the capillaries in the mucous membrane of some, more liable than others to the penetration of pollen granules, or, absorbtion having taken place, causes a peculiar excitation in those who are, by the possession of this idiosyncrasy, rendered susceptible.

Holding these views, attempted radical treatment may not result in success. "If the poison be continually introduced—as it will be during the season—the antidote, if one exists, can have but little chance of effecting a cure." Dr Mackenzie's treatment of hay fever is founded upon his conclusions regarding the nature of the disease. Avoidance of the cause, by a sea voyage or living in the city during the period when pollen is given off, protection by means of cotton in the nostrils and a gauze veil, care for the nervous system and increasing its resistance to exciting causes, these are the main indications, not neglecting the conjunctivitis, asthma and general febrile condition which may be present.

REPORT OF THE DEPARTMENT OF HEALTH, CITY OF CHICAGO, FOR THE YEARS 1883 AND 1884. Chicago: Geo. K. Hazlitt. 1885.

Those interested in public health, especially that of large cities, will find some very interesting and instructive reading in this Report of Health Commissioner De Wolf. In the very beginning of the report Dr. De Wolf justly criticises the useless bit of "red-tape" which gives the cleansing of streets to the Department of Public Works, and the cleansing of alleys and removal of house garbage from streets and alleys to the Department of Health. On this point he says: "The cleaning of a great city—and keeping it clean—is a labor of enormous magnitude, and of the most vital importance, and as there is really no demarcation between filth of the street and filth in the alleys, there should be no division of responsibility in its removal, and, in my opinion, one contract should cover the whole. Such a course *should* ensure efficiency and economy."

In addition to the usual duties of factory, dwelling-house, work-shop, meat and stockyards inspection falling to the lot of the health department of a large and rapidly-growing city, the Health Department of Chicago has a permanent nuisance on hand, which must be looked to at all times—the Chicago river, or perhaps, more properly speaking, the south fork of the south branch of the river. What to do with the river is the question now occupying the attention of a great many who know something about it, but many more who know nothing. Though, of course, not included in this report, it is pertinent to speak here of a very recent (about August 15) analysis of the water of Chicago. It has been claimed and asserted that the drinking water of the city is necessarily contaminated by sewage (entering the lake and being pumped back to the city from the "crib"). The recent analysis by Professor John H. Long shows that the drinking water of the city is free from sewage, and that, in comparison with the waters of some of the large Eastern cities it ranks among the best, if not the best on the list.

The Report also includes a detailed statement of the Bureau of Tenement and Factory Inspection, by Chief Inspector Gehnung; a report of the Registrar of Vital Statistics; a mortality report of the city for 1883 and 1884, which is very complete; a very suggestive report from the Smoke Inspector; a report of work performed by the sanitary police, meat inspectors, day scavenger service, licensed night scavengers and dead animal contractors, and a report from the small-pox hospital.

A comparison of the mortality percentage of Chicago with that of other large cities will show that the efficient Health Commissioner, in spite of the many disadvantages of political red-tape and topography of the city, does not confine his good work to the making of an interesting and instructive report.

SECOND REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF TENNESSEE, October, 1880–December, 1884. Published by Authority. Nashville: Albert B. Tavel, 1885.

When we consider the difficult struggle that the physicians of Tennessee have had for many years in inducing the State legislature to make provisions for a State Board of Health, and the very niggardly manner in which that Board has been provided for by the State since its establishment, we are somewhat surprised that there is anything left of it to make a report. And one of the first facts that meet the eye of the reader of the report is that not a dol-

lar has ever been provided for chemical work to be done for the Board; in fact, the Board would have been entirely without a chemist had it not been for the liberal offer of Professor Lupton, of Vanderbilt University, who offered five years ago to do the work without recompense.

The volume opens with the report of the Secretary, Dr. J. Berrien Lindsley, which occupies over two hundred pages. This is followed by a report on School Hygiene, by Dr. Daniel F. Wright, a paper of some seventy pages. In connection with this might be read with profit the succeeding paper on Physical Training at the State Normal School Gymnasium, which is only too short, by Mary E. W. Jones, the Director. Following these are report on Vital Statistics in Tennessee, by Dr. J. D. Plunkett; the report of the Committee on Prisons in Tennessee, by Dr. P. D. Sims; a report on Epidemics and Contagious Diseases, as they prevailed in the State in 1881–1882, by G. B. Thornton; a report by Dr. Plunkett on Bovine Tuberculosis; one on Abattoirs by Dr. Thornton; and two others by him on Gulf Coast Quarantine and the Conferences of State Boards of Health. Dr. James M. Stafford contributes a paper on the Natural Divisions of Tennessee in their Relation to Disease, which with the succeeding paper on the Medical Topography of the Valley of East Tennessee, are valuable contributions to the Medical Geography of the State. The remaining paper in the Report is by Dr. Plunkett, on Ozone, and its Relations to Public Health. The volume closes with the usual reports of local and county boards, etc.

Although this volume is not such as should come from a Board of Health which is in good working order, it is certainly due to no fault of the Board or of the individual members of it that it is not. The papers and reports show that the present Board is such as would make an efficient body for the protection of the health of the State should the people arouse their law-makers to a sense of their duty to themselves and to their neighbors. The papers are instructive, and are evidence that the writers only need State provision to do good work in public health.

A Correlation Theory of Color-Perception. By Charles A. Oliver, A.M., M.D.; One of the Ophthalmic and Aural Surgeons to the St. Mary's Hospital, Philadelphia, Pa. A reprint from the American Journal of the Medical Sciences, January and April, 1885.

The author has carefully and patiently studied the many conflicting and opposing theories of color-perception, and has done much toward their elucidation and simplification. Accepting the theory of undulation, and that a difference in the number of vibrations makes a change in the natural result, he makes three positive assertions:

First—That as these actions are perceived, there must be organs able to appreciate them;

Second—That each series of organs must have an apparatus able to respond to the quality of its perceived impressions;

Third—That as all natural imponderable stimuli are the resultants of a mere difference in the number of vibrations of one and the same ether, the organs for the receipt of the different varieties must be but analogues and modifications of each other.

The author very properly advises the discontinuance of the terms "anthropochromatopsia," "hypo-anthropochromatopsia," "pseudochromatopsia," and the substitution of the much better English expressions, "normal human color-perceptions" and "subnormal human color-perceptions." The latter is subdivided into acquired and congenital.

The article shows much study and originality, and its careful perusal will fully repay anyone who wishes clearer ideas of how natural colors are perceived.

A Text-book of Physiology. By M. Foster, M. A., M. D., F. R. S., Prælector in Physiology and Fellow of Trinity College, Cambridge. Third American from the Fourth and Revised English Edition. With Extensive Notes and Additions, by Edward T. Reichert, M. D., Demonstrator of Experimental Physiology in the University of Pennsylvania. With 271 Illustrations. Philadelphia: Lea Brothers & Co., 1885. Chicago: Jansen, McClurg & Co.

For several years Foster's Physiology has occupied a peculiar and quite enviable position among the text-books on this most important branch of medicine. In the highest sense scientific, it should nevertheless be the constant companion of every student of medicine who has some other work on this subject as a text-book. To the student who is not engaged in special physiological study it should be his most constant book of reference, while to him who is specially engaged in physiological work it is an absolute necessity.

The present edition has not been greatly changed; indeed, there are but few essential changes, except in the general make-up of the book. Quite a number of good illustrations have been added, and additions have been made to the appendix on the "Chemical Basis of the Human Body," by Mr. Sheridan Lea, who has had charge of this department of the work in this as in former editions.

ASSOCIATION ITEMS.

MEMBERSHIP BY APPLICATION.

At the meeting of the American Medical Association held at Washington, in May, 1884, an amendment to Regulation II was adopted, which provides that membership in the Association shall be obtainable by any member of a State or County Medical Society recognized by the Association, upon application endorsed by the President and Secretary of said Society; and shall be retained so long as he shall remain in good standing in his local Society, and shall pay his annual dues to the Association. Hitherto attendance as a delegate at an annual meeting has been necessary in order to obtain such membership.

Application for membership, accompanied with FIVE DOLLARS, for annual dues, and the Certificate of Membership in the local Society, should be sent directly to the undersigned, on receipt of which the weekly JOURNAL OF THE ASSOCIATION will be forwarded for one year.

RICHARD J. DUNGLISON, M.D., *Treasurer.*
Lock Box 1274, Philadelphia, Pa.

MISCELLANEOUS.

AMERICAN RHINOLOGICAL ASSOCIATION.—The third annual meeting of the American Rhinological Association will be held at Lexington, Ky., October 6th, 1885. Papers and discussion will be devoted exclusively to the diseases of the nasal passages and their sequences. The officers for 1885 are: President, P. W. Logan, M.D., Knoxville, Tenn.; First Vice-President, A. DeVilbiss, M.D., Toledo, Ohio; Second Vice-President, J. A. Stucky, M.D., Lexington, Ky.; Recording Secretary, C. A. Sims, M.D., St. Joseph, Mo.; Librarian, N. R. Gordon, M.D., Springfield, Ill. Information concerning the full programme, membership, papers, attendance, etc., may be learned from any of the above officers of the association.

REMOVING MICROBES FROM WATER.—PROFESSOR FRANKLAND has, we read in the *Journal of the Society of Arts*, recently made a series of experiments on the relative efficiency of filtration, agitation with solid particles, and precipitation, as a means of removing micro-organisms from water. His method was to determine the number of organisms present in a given volume of the water, before and after filtration. The filtering materials were greensand, silver sand, powdered glass, brickdust, coke, animal charcoal, and spongy iron. These materials were all used in the same state of division, being made to pass through a sieve of forty meshes to the inch. Columns six inches in height were used. It was found that only greensand, coke, animal charcoal, and spongy iron wholly removed the micro-organisms from the water filtered through them, and that this power was lost in every case, after the filters had been in operation a month. With the exception of the animal charcoal, however, all these substances, even after being in operation for a month, continued to remove a very considerable proportion of the organisms present in the unfiltered water, and in this respect coke and spongy iron occupied the first place. Water containing micro-organisms was also agitated with various substances in the same state of division as above mentioned, and after subsidence of the suspended particles, the number of organisms remaining was determined. A gramme of substance was in general agitated with 50 cubic centimètres of water for a period of about 15 minutes. It was found that a great reduction in the number of organisms could be produced in this way; and the complete removal of all organisms by agitation with coke is especially to be remarked. Precipitation by "Clark's process" also showed that it affords a means of greatly reducing the number of these organisms in water. Dr. Frankland concludes from his experiments, that, although the production in large quantities of sterilized potable water is a matter of great difficulty, involving the continual renewal of filtering materials, yet there are numerous and simple methods of treatment which secure a large reduction in the number of organisms present in water.—*British Med. Jour.*, Aug. 15, 1885.

THE WILBUR SCHOOL AND HOME FOR FEEBLE-MINDED CHILDREN at Kalamazoo, Michigan, was opened for the admission of inmates on Monday, August 3, 1885. All who wish to enter the present school year should make application to DR. C. T. WILBUR, Kalamazoo, Mich.

SECRETARIES OF COUNTY MEDICAL SOCIETIES throughout the United States are particularly requested to send the names and addresses of the members of the Societies to the JOURNAL at their early convenience.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM AUGUST 15, 1885, TO AUGUST 21, 1885.

Col. John Campbell, Surgeon, granted leave of absence for one month.

First Lieutenant Francis J. Ives, Asst. Surgeon (recently appointed), ordered for duty in Dep't. Platte. (S. O. 184, A. G. O., Aug. 13, 1885.)

Wolverton, W. D., Major and Surgeon, granted leave of absence for twenty days. (Washington Bks., D. C.) (S. O. 171, Dept. of the East, Aug. 14, 1885.)

Maus, L. M., Capt. and Asst. Surgeon, in addition to his other duties, assigned to duty as attending surgeon of the Department, Rifle Camp. (S. O. 83, Dept. of Dakota, Aug. 3, 1885.)

Black, C. S., First Lieutenant and Asst. Surgeon, upon return of troops F. and L. Third Cavalry to Fort Davis, Tex., to rejoin his proper station, Ft. Clark, Tex. (S. O. 98, Dept. of Texas, Aug. 13, 1885.)

McCaw, W. D., First Lieutenant and Asst. Surgeon, having reported back at these hdqrs. from detached service, ordered to rejoin his proper station, Fort Lyon, Col. (S. O. 122, Dept. of the Missouri, Aug. 17, 1885.)

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING AUGUST 22, 1885.

Denman, M. C., Surgeon, Simon, Wm. J., Surgeon, to temporary duty at Annapolis, Me., as members of Board for physical examination of candidates for admission to U. S. Naval Academy.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE TWO WEEKS ENDED AUGUST 22, 1885.

Bailhache, P. H., Surgeon, granted thirty days' leave of absence, August 15, 1885. Chairman of Board to examine candidates for appointment as cadet in the Revenue Marine Service, Aug. 19, 1885.

Irwin, Fairfax, Passed Assistant Surgeon. Recorder of Board, Aug. 19, 1885.

Bailhache, P. H., Surgeon, to proceed to Delaware Breakwater Quarantine as Inspector, Aug. 15, 1885.

Stoner, George W., Surgeon, granted leave of absence for thirty days, Aug. 10, 1885.